

CULINARY HERBS.

HOW TO GROW AND WHERE TO SELL,
with an Account of their Uses and History.

BY

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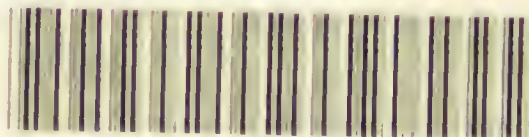
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CULINARY HERBS.

SWEET or Culinary Herbs may be defined as plants whose green parts, ripe seeds or tender roots have an aromatic flavour and fragrance due to a volatile oil, or to some other chemical substance peculiar to the individual species. Owing to the fragrance most of these herbs possess, they have been called **sweet**, and from their use in cookery for the purpose of imparting their characteristic flavour to soups, stews, dressings, sauces and salads, they are popularly called "Culinary," though this term is less appropriate than the former, since many other herbs such as cabbage, spinach, kale, etc., are also, strictly speaking, culinary herbs ; but these, being used as vegetables and not as flavouring, are more accurately known as **potherbs**, and others, also employed for the table, but in an uncooked state, we distinguish as **Salad Herbs**.

ORIGIN OF SWEET HERBS.

Most of the sweet herbs in question, though now found growing freely in every well-stocked kitchen garden in this country, were originally natives of the Mediterranean region, and were in use by the nations bordering its shores from the earliest days, long before our era. There are references in both the Old and New Testament to various herbs—Mint, Anise, Rue, Cumin and others—and among the Greeks and Romans, many of our garden herbs were held in great esteem, and employed by them and through the Middle Ages, probably far more than at the present time.

Medicinal Uses. Several of the plants were also formerly so prominent in medicine as to be designated "official," and nearly all were extensively used by the physicians of olden days. Only a few, however, still hold their place in official medicine, though most of them are still valued in domestic practice, and several are still employed on account of their pleasant, aromatic flavour to disguise the disagreeable taste of other drugs. Some, however, considered by the great herbalists of 300 years ago as specifics for certain diseases and also efficacious for innumerable other maladies, have almost entirely lost their reputations and are even regarded now as almost inert.

How Sweet Herbs mostly belong to Two Great Plant Families.

Of the thirty odd plants that from their uses may be designated culinary herbs, it is to be noted that the majority belong to one or other of the two great plant families. **Labiatae**—the Deadnettle family—and **Umbelliferæ**—the Hemlock family. To the former, the Sage Thyme and Mints belong; to the latter, the Parsley, Fennel and Dill. With the exception of Tarragon and Tansy, which belong to the **Compositæ**, or Dandelion family, and Parsley and its relations, all the more important herbs used for the sake of their leaves belong to the **Labiatae**, while all the herbs whose seeds are used for flavouring belong to the **Umbelliferæ**.

The Herbs belong to the **Labiatae** whose culinary uses in the present or past are sufficiently important for our consideration are:—

Balm (*Melissa officinalis*),
 Basil (Ocimum Basilicum and O. minimum),
 Catmint (*Nepeta Cataria*),
 Clary (*Salvia Sclarea*),
 Horchound (*Marubium Vulgare*),
 Hyssop (*Hyscopus Vulgaris*),
 Marjoram (Origanum Onites, O. Marjorana and O. vulgare),
 Rosemary (*Rosmarinus officinalis*),
 Sage (*Salvia officinalis*),
 Savoury, Summer (*Satureia hortensis*),
 " Winter (" montana),
 Spearmint (*Mentha viridis*),
 Thyme (*Thymus vulgaris*).

All these plants are characterised by having square stems, opposite, simple leaves and two-lipped flowers, which are placed in the axils of the leaves, sometimes singly, but generally several together, forming little rings or whorls, the various tiers of which often constitute loose or compact spikes. On fertilisation—mainly by bee—four little seedlike fruits or nutlets are produced, protected by the calyx, which remains attached to the plant. The leaves are mostly sprinkled over with tiny glands, containing a volatile oil, upon which the fragrance and pungency of the individual species depends.

The most important sweet herbs belonging to the order **Umbelliferæ** are—in order of importance—

Parsley (*Carum Petroselinum*),
 Dill (*Anethum graveolens*),
 Fennel (*Foeniculum dulce* and *officinale*),
 Angelica (*Archangelica officinalis*),
 Anise (*Pimpinella anisum*),
 Caraway (*Carum Carvi*),
 Coriander (*Coriandrum sativum*),
 Chervil (*Scandix Cerefolium*),
 Cumin (*Cuminum Cyminum*),
 Lovage (*Levisticum officinale*).

The stems of umbelliferous plants are cylindrical and usually hollow; the leaves placed alternately on the stem are generally compound (i.e., cut into right up to the mid-rib, not merely toothed, as in *Labiatae*), and the basis of their stalks broaden out into a sheath which clasps the stem. The flowers are small, generally white or pinkish, sometimes yellow, and mostly arranged in umbels, i.e., the stalks of each little group springing all from one point, like the ribs of an umbrella, these umbels, or umbellules, being generally also grouped each on separate stalks converging to a central point—thus forming a compound umbel, which terminates the main stem. The fruits are composed of two seedlike, dry portions, or carpels, each containing a single seed and usually separating when ripe. Each carpel, or half of the fruit, bears 5 longitudinal, prominent ribs, and several lesser ones. In the spaces between the ribs are numerous oil ducts or *vittæ*, to which the aromatic properties of the fruit are due. Though the oil is generally also found in other parts of the plant, it is present to the greatest extent in the fruits.

With the exception of Tarragon, the sweet herbs belonging to the great order **Compositæ** are less important. The distinguishing feature of this family of plants is that the flowers are arranged in tightly packed heads on a disc, or “receptacle,” which is surrounded by closely fitting, leaf-like bracts, termed the “involucre,” forming a kind of cup. Only four plants belonging to this family are deserving of our consideration as sweet herbs, though others, such as Dandelion and Chicory, are also useful in the kitchen as salad plants.

These four are :—

Marigold (*Calendula officinalis*),
 Southernwood (*Artemisia Abrotanum*),
 Tansy (*Tanacetum vulgare*),
 Tarragon (*Artemisia Dracunculus*).

To the representatives of these three great families may be added :—

Rue (<i>Ruta graveolens</i>)	belonging to the order,	Rutacea,
Borage (<i>Borago officinalis</i>)	..	Boraginaceæ,
Burnet (<i>Poterium Sanguisorba</i>)	..	Rosaceæ,
Sweet Bay (<i>Laurus nobilis</i>)	..	Lauraceæ.

Mint, Parsley, Sage, Thyme and Marjoram may be considered the principal sweet herbs now in general use, but the many others unnumbered, which formerly were made use of to a greater degree than now, might well with advantage to our cuisine be more widely known, and deserve more attention than is generally given them.

General Survey of the Uses of the various Herbs.

The greatest demand now-a-days is undoubtedly for Parsley, on account of its being used more extensively as a garnish than any other herb. As a flavouring agent, it has probably a wider application than any of the other herbs. It is chiefly employed in dressings with mild meats, such as chicken, turkey, veal, and with fish, also for soups, stews and sauces, especially those used with boiled meats, farinaceæ and fish.

Sage, being a strongly flavoured plant, is used chiefly with such hot meats as pork, goose, duck and some kinds of game. It is used to flavour sausage meat, and in some countries with certain kinds of cheese. In the United States it is more widely used than any other culinary herb.

Thyme and Savoury are used about equally, chiefly like Parsley, both, in addition (especially Thyme), being used in certain kinds of sausage.

Marjoram is similarly employed though to a lesser degree, and next in favour come Balm, Basil and Fennel. All these milder herbs are often mixed, the blend resulting in a new compound flavour, the mixture being utilised in the same manner as the individual herbs.

Tarragon and Spearmint are used in a different manner to those just mentioned. Tarragon chiefly as a decoction, in the flavouring of hot sauce, or in the preparation of vinegar; and Mint, with vinegar, in the dressing of cold meats, or as a flavouring to green peas or pea soup.

Dill is probably the most important of the herbs whose seeds, rather than their leaves, are used in flavouring food other than confectionery, being employed greatly in the flavouring of cucumber pickle, largely consumed on the Continent, and to a more limited degree by foreign residents in this country.

Garnish Herbs.

Though Parsley is more widely used than any other herb as a garnish, several others, **Fennel, Tansy, Savoury, Thyme, Marjoram, Basil** and **Balm** make pretty garnishes, but are rarely used (except Fennel, for fish) though their pleasing effect may be heightened by adding here and there a few herb flowers, such as Thyme or Savoury.

Herbs as Decoration in the House and Garden.

Sweet Herbs can also be used decoratively in the house and garden, as well as in the kitchen. A charming bouquet may be arranged of the delicate flowers of Marjoram, the pale pink blossoms of Thyme and the bright yellow umbels of Fennel, mixed with fragrant sprigs of lemon Balm and the bluish, finely-cut leaves of Rue—a bouquet dainty in appearance and in sweetness hard to excel. And not only is such a dainty bunch of herb flowers decorative, but its pleasant aromatic odour, from its antiseptic properties, is of value for the general health of the house, and especially for the sick room where the scent of these aromatic herbs has a refreshing and invigorating influence on the atmosphere, being not so cloying as the perfume of most flowers, and helping to keep drinks in a room sweet. The presence of these herbs will also greatly tend to keep a sickroom free of troublesome insects, who have a distaste for the scent of nearly all of them. Many of the herbs in a dried state, such as Rosemary, Rue, and to a still greater extent Lavender, have, moreover, from olden times been employed as deodorisers, the odours given off by them when burnt being both healthy and pleasant.

In the garden, a most decorative border can also be arranged with herbs—edging and rockery can be **useful** as well as pleasing to the eye. For instance, Sages backed by late flowering Orange Lilies go very well together, and being in flower at the same time make an effective grouping. Again, the calyces of Sage flowers remain on the plants well into late summer and give a lovely haze of reddish spikes; the smell of these seeding spikes is very distinct from the smell of the leaves, and much more like that of lemon-

scented Verbena, pungent, aromatic and most refreshing. Catmint and Hyssop grown together make a charming border, the soft blues of the blossoms blending pleasingly, and the grouping being still more effective if Lavender and Rosemary are grown behind them, especially if the bed be backed by a grey stone wall.

How to Prepare a Herb Dinner.

We have touched on the uses of the various herbs with regard to meat dishes, but it is easy to serve a tasty little luncheon for vegetarians, in which each course owes its distinguishing feature to the common culinary herbs, though before going into the matter, a "Dinner of Herbs" may not sound very attractive.

A Parsley Soup may start the meal, and may be prepared from the following recipe, much used in Belgium: Thicken flour and butter together as for melted butter sauce, and when properly cooked thin to soup consistency with milk. Season with salt, pepper and onion juice. Boil up, and just before serving add sufficiently finely chopped parsley to colour the soup green. Serve with fried croutons.

A Savoury Omelette may follow the soup. Prepare the omelette in the ordinary manner, and before folding it add a layer of chopped Thyme, Tarragon and Chives; or the herbs may be stirred into the beaten up eggs before cooking the omelette.

Instead of an omelette, savour eggs stuffed with sweet herbs and served in cream sauce may be preferred. Boil the eggs hard, cut them lengthwise and remove the yolks. Mash and season them, adding the herbs as finely chopped as possible. Shape again like yolks and replace in the whites. Cover with a hot cream sauce or onion and tomato sauce and serve as usual.

Double Savoury Omelette and Stuffed Eggs may be garnished with shredded parsley.

With the Eggs may be served a dish of Onion Potatoes, prepared by placing in alternate layers slices of the two vegetables, with little lumps of butter, seasoning with pepper and salt, adding milk even with the top layer, and baking till done.

A Mixed Salad may follow: to the heart leaves of Lettuce add Nasturtium leaves and blossoms, Tarragon, Chives, Mint, Thyme and any other green leaves of aromatic herbs. Dress

with a simple oil and vinegar, dressing, omitting sugar, mustard or other flavouring, as the leaves themselves are piquant enough.

With this Salad, **Sandwiches** may be passed round, made with lettuce or nasturtium dressed with mayonnaise. The mayonnaise dressing may be made more piquant by the addition of chopped Chives, or Tarragon, or Thyme. Such Herb Sandwiches in different varieties will be found an appetising addition also to the picnic hamper: sweet fennel and the tender leaves of sage, marjoram and other herbs finely chopped, mixed with cream cheese, make a piquant layer between two thin slices of bread.

The luncheon may be concluded with a cream cheese into which, with a silver knife, has been worked any of these herbs (or any two of them that agree with it well), served with toasted biscuits; or the biscuits may be toasted with ordinary cheese, over which sage and thyme are grated.

Summer Drinks.

Some of the sweet herbs may be used to give additional flavour to summer drinks: Spearmint (the ordinary garden mint) adds a pleasing pungency to lemonade, and the blue flowers of Borage have long been employed in like manner, and are often also added to a mixture of honey and water, to grape juice, or to raspberry vinegar and other fruit drinks.

Candied Roots.

The aromatic roots of Lovage may be candied, and form a pleasant substitute for the preserved ginger imported from the East.

CULTIVATION and PROPAGATION of CULINARY HERBS.

It is a popular error to say "ordinary kitchen herbs will grow anywhere," for to produce medicinal plants, among which those also used for culinary purposes must be included, it is necessary to garden thoughtfully, *i.e.* to know and practice, not only all the essentials of good gardening, but in addition, *science* is required, to get the highest medicinal qualities in the plant, for a plant may be well grown and "look nice" and yet be grown under such conditions that the chemical constituents needed may not be present in sufficient degree. To produce herbs successfully needs a higher form of gardening than the ordinarily accepted good work, for special

scientific knowledge must be added to the everyday gardener's practical rules.

In choosing the **Situation** of the Herb Garden, it is in general advisable to choose a south aspect and a smooth, gentle slope, but whatever the nature of the surface available and the aspect, the herbs should always be given the most sunny spots in the garden, free from the shade of trees, fences or buildings, as the development of the volatile oils on which the value of the herb depends is greater when the plants are grown in full sunshine.

As to **Soil**, a light, sandy loam, with a porous subsoil ensuring good drainage, will be the most favourable, as it is warmed quickly and is easily worked. A **Clay Loam** is less desirable as it cannot be worked so early in the season or after a spell of rain, and a very sandy soil is too porous and apt to scorch the plants. Good cultivation will, however, do much to remedy original defects in the soil.

For obtaining the best results in aromatic herbs a very rich soil is not required, as in such soils the growth is apt to be too rank, the quantity of volatile oil being small in proportion to the leafage produced.

Preparation of the Soil should commence in the first days of spring, well-decayed manure being spread at the rate of a bushel or more to the square yard, and dug in with the garden fork as soon as the soil is dry enough to crumble readily, the ground being tamped over thoroughly until a fine tilth is obtained. On heavy land, the soil should be dug over in the autumn and left rough for six weeks to act on the humus, which will crumble when raked or borrowed in the spring.

A good firm harrow, kept constant, and seeds may be sown or plants transplanted into the bed, and for the rest of the season the surface ought to be kept loose and open by stirring every week or ten days and after every shower, not only to keep weeds in check, but to keep the surface layer in a state of powder, which acts as a mulch preventing loss of moisture from the lower layer around the roots.

Propagation. Most herbs can readily be propagated by means of seeds. Some, however, such as Tarragon, which does not flourish well in this country, and several other perennial kinds, are propagated by **division, layers or cuttings**. As the

seeds in many instances are very small and slow to germinate, they are often sown in shallow boxes or seed pans, and when large enough to be handled transplanted to somewhat deeper boxes—a couple of inches being allowed between the plants, being finally transplanted into permanent quarters in the garden when conditions are favourable, the soil moist and warm, and the season settled. The seed may also be sown out-of-doors in drills, about the end of April or early May, and thinned out as it comes up, but the process just described is more economical. Fennel, Basil, Knotted Marjoram and Dill are generally sown out-of-doors, as they are not subject to the attacks of birds as many other seeds are.

Layering. Many of the perennial herbs, such as Sage, Thyme and Savoury are easily propagated by layering, the stems being pegged down and covered lightly with earth. These plants are “stem-rooters” and, under favourable conditions of moisture and temperature, roots are generally formed in three or four weeks, wherever the stem is in contact with the earth, when the stem may be separated from the parent plant and removed to new quarters. If there are several branches on a stem, each of these may be used as a new little plant, provided it has some roots, or has a rooted portion of the main stem attached to it.

Layering is the simplest and most satisfactory method of propagation under ordinary conditions, for the stems are practically certain to take root if left undisturbed, and the rooted plants if transplanted with ordinary care will rarely fail to grow. Thus less time is taken than with plants grown from cuttings, and much less than with those raised from seed. In short, stock raised by layering will produce a crop sooner than the plants obtained by other modes of propagation undertaken at the same time.

Cuttings. Those herbs like the Mints and those related to them, which have creeping underground stems, are easily propagated by means of cuttings—each joint of the stem producing a new plant if placed in rather moist soil.

The other perennial and biennial herbs are readily propagated by means of stem cuttings or “slips.” The cuttings are made either of fully-ripened wood of the preceding or the current season, or they may be of firm—not succulent—green stems. The cuttings should be about 4 or 5 ins. long. After trimming off all but a few of the upper leaves, the cuttings should be plunged nearly full depth in

light, porous, well-drained loam, and left undisturbed and well shaded till they show signs of growth, when they may be transplanted. They must never be allowed to become dry, and green-wood cuttings made during the summer should, especially, always be given the coolest, shadiest corner in the garden. Cuttings taken in spring may be set out in permanent quarters as soon as rooted, but summer cuttings should generally be left in their beds until the following spring, though they may be removed for winter use to the greenhouse.

Division. Sometimes clumps of herbs of spreading growth, such as Mint, are divided into pieces about 6 ins. square, a sharp spade being employed, and the squares placed in new quarters and firmly pressed into the soil. If division is done in early spring, before growth starts, little damage is done to the plants. It is not too late, even early in May, to increase the stock of Mint, Balm, Marjoram, Thyme, Hyssop and Savoury, by off-sets or division of the roots. If done in showery weather they start away freely, and make good plants before late summer. They must be well watered.

The artificial methods of propagation, especially by cuttings or layers, have the advantage of propagation by means of Seeds, in the certainty of perpetuating the desired characters of any individual plant that may prove to have specially good points. Such plants, if more productive than the others among which they have appeared, should always be used as stock, as the yield of the plantation will thereby be increased.

By expending a little more time, any desired number of plants may, of course, be obtained from seed.

Transplanting. The ordinary methods of transplanting apply equally to herbs. It may not often be practicable to grow the plants in small flower-pots and set them in the garden when they have formed a small ball of roots, though this is the ideal way. A more generally followed and successful proceeding is to grow them in the greenhouse, in seed pans and then in shallow boxes, set several inches apart, as soon as large enough to handle, and where they should be allowed to grow for several weeks and form a mass of roots. When to be set in the garden in permanent quarters, the plants should be broken carefully apart by hand with as little loss of root as possible. If grown in little nursery beds in the open, or in hot beds or cold frames, the plants should be "pricked out," i.e.,

transplanted when very small, to a second nursery bed, in order to make them strong and sturdy before being removed to their final quarters.

Transplanting should only take place when the ground is moist, as it is immediately after being dug. An ideal time for transplanting is just before a fall of rain, though immediately after one is almost as good. It is better to transplant in cloudy weather and towards evening, than in sunny weather and in the morning.

The plants should always be taken up with as little loss of roots as possible, be kept exposed to the air as short a time as possible, and when placed again in the ground should have the soil packed in very firmly about their roots. After setting, the surface soil should be loosened, to act as a mulch and prevent excessive loss of moisture from the lower layers round the roots.

Harvesting and Preparation for Use. We may divide Herbs into three groups: those whose **Leaves** yield the aromatic flavour, such as Parsley, Mint, Sage, Thyme, etc.; those whose **Seed** is used, such as Dill, Anise, Caraway and Fennel, and those whose **Roots** or **Stems** are employed, such as Lovage and Angelica.

Foliage herbs are employed either green or dried, as a decoction or infusion.

When used green, if newly gathered, the herbs yield their aromatic properties to the fullest extent, and add a finer and more delicate flavour to sauces and stews than when used in a dry condition. Again, in salads, they should always be used green, as specks of dried herbs would spoil the look of a salad, and both these and a decoction of the herbs would impart a greatly inferior flavour to the salad as compared with the crisp, fresh leaves.

As most herbs, however, cannot be obtained throughout the year, they are dried or infused for use when the green leaves will no longer grow in the open.

Every household in the kingdom keeps for winter use a bottle or tin of powdered sweet herbs for flavouring soups, entrees and vegetables, and it seems almost incredible that before the war we annually imported many thousand pounds worth of dried and powdered ordinary culinary herbs, such as Sage, Thyme, Mint, Parsley, etc., to meet this demand. This should have been quite

unnecessary, as they can so easily be grown here with a minimum of trouble and outlay, and there is no reason why everyone who has a garden should not propagate and dry these herbs wherever the soil suits them, quite apart from those who may grow them on a commercial footing, to meet all home requirements and obviate the necessity of them being imported from foreign countries.

The British Guild of Herb Growers has pledged itself to foster the cultivation of culinary herbs amongst us to a really adequate extent, so that we shall no longer have so largely to rely upon Germany and other countries for these homely aids to cookery, but produce ourselves all that are needed to meet the steady demand. The Guild is always ready to purchase hundreds of tons of these herbs, and it is with the object of increasing the knowledge of the subject, so that members of the Guild and others may understand not only how to raise profitably crops of these useful herbs, but also how to prepare them for sale, or for home consumption, that this pamphlet has been compiled.

By co-operative action, these herbs might be much better grown in this country, and would probably find a large market also in the United States and in the Colonies, as they could be grown purer and freer from admixture with other species, than is the case with those imported yearly by the shipload from south European countries, where, as in Spain, numerous varieties of Thyme occur in the wild condition.

Harvesting of the Herbs. For whatever purpose and in whatever condition they are to be used, the aromatic flavours of foliage herbs are always best in well developed leaves and shoots of plants in full growth, and the flavours are always strongest and characteristic just before the flowers break into blossom. These aromatic properties are due to essential oils, which are dissipated by heat; they are also present to a greater extent in the morning than since the sun has reached its full height. To obtain the full fragrance of sweet herbs, therefore, especially for drying, they should be harvested just when coming into flower and be gathered only on a fine day, in the morning, as soon as the dew is off, before the hot sun has taken any oil from the leaves. All leaves that are withered, stained or insect-eaten, or otherwise not in perfect condition should be removed. All herbs with at all woody stems should then be tied loosely in bunches and hung to dry on stems in the open, if the day be warm, though in half shade, and preferably under cover, to avoid damping in case of showers. When dried in

strong light out-of-doors, it is advisable to cover the bunched with thin paper, to prevent the colour being injured by the light. The herbs must be brought indoors to a dry room or shed at night, before there is any chance of becoming damp from dew. When the leaves are quite dry and crisp, artificial heat near a stove may be used to dry the stems after the leaves are quite shrivelled, to finish the operation. Short-stemmed species and leaves may be dried on wire trays or wooden racks, placed a few feet above the ground to ensure their being exposed to a current of air, being placed in a single layer so that the warm air circulates to all parts to be dried.

Drying may also be carried out indoors, in a hot, sunny attic, the window being left open at the top by day, so that there is a current of air and the room does not become steamy. The door may also be left open. The herbs can either be hung, bunched, over strings, or if the stems are succulent, they can be placed on canvas or wire-mesh trays, or placed on butter cloth, stented, i.e., if hooks are placed beneath the window and on the opposite wall, the butter-cloth can be attached by rings sewn on each side of it and hooked on, so that it is stretched quite taut. Failing sun, any ordinary shed, fitted with racks and shelves can be used for drying herbs, provided it is ventilated near the roof and has a warm current of air, caused by an ordinary coke or anthracite stove. Empty glass-houses can be readily adapted in drying-sheds, especially if heated by pipes and the glass shaded; ventilation is essential and there must be no tank in the house to cause steaming; the roof also must be quite watertight.

Two or three days will be sufficient for thorough drying, which is essential should be carried out in a gentle heat never above 100° Fahr. and quickly, that the aromatic odour may be preserved—the quicker they are dried, the better, as “heating” or fermentation may thereby be prevented. The best drying temperature for drying aromatic herbs is about 70°. Their strength and fineness of flavour depends greatly on their harvesting and drying.

Oven drying of herbs should be avoided, as the oil is apt to evaporate somewhat before the leaves get dry. The bunched should be nearly equal in length and uniform in size to facilitate packing and placed when dry in airtight boxes or tins to prevent re-absorption of moisture. The leaves may also be stripped from the stems as soon as thoroughly dry and rubbed through a fine sieve so as to be freed from stalks as much as possible, or pounded into a mortar and thus powdered stored in stoppered bottles, or tins rendered airtight.

If preparation for market and not for home use, the rubbed herbs will, of course, command a higher price than the bunched herbs, and should be put up in tins or bottles, containing a quantity of uniform weight. If there be the slightest trace of moisture in the powder, it should, before bottling, be dried to ensure against mould.

Powdered herbs should never be stored in paper or paste-board packages, since the delicate oils readily diffuse through the paper, and in course of time the powder becomes valueless for flavonning purposes. This loss of flavour is particularly noticeable with Sage, which even when kept in tins or air-tight bottles only keeps its flavour for two years. The practice, therefore, of hanging up herbs in loose bundles in a storeroom and leaving them till required, whether covered with paper to preserve them from dust or not, is not to be recommended, as they soon lose their fragrance. Sometimes, however, when the bunched herbs are dry, they are pressed into cakes and then wrapped in paper, and thus stored in air-tight boxes they will retain their flavour two or three years.

Mostly all herbs should be cut and dried before the middle or end of September, not so much for the sake of the herbs to be dried, as for the roots left in the ground. There are many kinds of herbs which tend to perish during winter if they are not cut in time to allow the plants to make short growth before the growing season comes to an end.

Except as garnishes, herbs are probably more frequently used in a dry state than in other ways. Not only can large quantities be kept in small space, but the method of drying is simpler than that of infusion or decoction, and dried herbs can be used for most purposes—stuffings, soups, stews and sauces, where their fine particles are not objected to. In the case of clear soups dried herbs can well be used, the particles being removed, before serving, by straining.

To make good infusions, the freshly gathered foliage—which must be quite clean—is packed into stoppered jars, covered with the choicest vinegar, and the jars kept tightly closed for a couple of weeks, when the fluid is strained off into another jar and is ready for use, though care must be taken to ascertain its strength and the quantity to use. In the case of Mint, the leaves are very finely chopped before being bottled, and both liquid and leaves are employed.

An objection to such decoctions is that the flavour of vinegar is not always desired in a culinary preparation, as well as that of the herb itself. Tarragon, Mint and the seed herbs such as Dill are more often used in ordinary cookery as infusions than otherwise.

Seed Herbs. The time of harvesting the herbs whose seed is used, such as Dill, Anise, Caraway, etc., differs from that customary with the foliage herbs mainly in the ripeness of the plants, which are gathered as soon as the seeds show signs of maturity but before they are ready to drop. Special care must be paid to the details of cleaning. The seed-heads to present a good appearance should be gathered before they come at all weather-beaten. Next, the seed must be perfectly clean, free from chaff, bits of broken stem and other debris; much depends upon the method of handling as well as upon harvesting. In threshing, care must be taken to avoid bruising the seeds, especially the oily ones, by pounding too hard, or by tramping upon them. Threshing should never be done in damp weather—always when the air is very dry.

In clear weather, after the sun has dried off the dew, the ripe plants or seed-heads are harvested and spread thinly on stout, closely woven cloth-ticking or sail-cloth in a warm open shed, where the air circulates freely. Generally in a few days, the tops will have become dry enough to be beaten out with a light flail or rod, care being taken not to injure the seed. It is a good plan to carry out the threshing on a sheet spread on a lawn, whereby the force of the blows will be lessened and bruising of the seeds prevented. A convenient size for the sheet is 10 feet by 10. After threshing, the seeds should be sieved to remove portions of the stalks, and then allowed to remain for several days longer in a very thin layer, being turned every day to remove the last vestige of moisture. It is also a good plan to have the drying sheet suspended a few feet from the ground, so that the air may circulate below as well as above the seed. Not less than a week for the smallest seeds, and double that time for the larger ones, is necessary to carry out drying effectively. Small quantities of seeds may be rubbed out from the heads between the palms of the hands, instead of threshing. It is imperative that the seed be dry before being put into storage packages or tins.

If infusions are to be made of the seed, the drying is, of course, unnecessary, the seed being put into the vinegar as soon as the broken bits of stem are removed by sieving, after threshing has been carried out.

Herbal Recipes. Old time English Cooks made far more use of the garden products than do the modern ones. At the present day, also, Italian and Flemish cookery are prolific of recipes in which many garden herbs appear, for instance, Rosemary and Southernwood, now no longer used by us in the kitchen. Our ancestors, however, recognised the full value of our herbs, and many old recipes still exist in which they play a part.

In Warner's "Antiquities of the Culinary Art," published in 1790, we find the following:—

"*Fortune of Felle* (herbs). Take good erbes. Gryndo hem and medle (mix) hem with floer and water; and a little ~~zest~~ (yeast) and salt, and frye hem in oyle and ete hem with clere hony."

"A handful of slices horseradish root, with a handsome little ~~taquet~~ of Rosemary, Tyme and Winter Savoury" is recommended in Collier's sequel to "The Compleat Angler," in the directions for dressing a trout.

In another more recent cookery book we find a recipe for Herb Powder:—

Take fresh Marjoram, Basil, Bay leaf, Thyme, Parsley, and dry in the sun until crisp. Pick carefully off the stalk and rub into fine powder. Add a small quantity of dried and powdered lemon peel, allowing to each ounce of herbs in powder one small tablespoon of salt and half this quantity of ground white pepper. Sift through a piece of coarse muslin, and store for use in small bottles.

This makes an excellent herb powder for flavouring purposes.

A Herb Mixture of equal proportions of Knotted Marjoram and Winter Savoury, with half the quantity of Basil, Thyme and Tarragon, all rubbed to powder and kept in a closely corked bottle is also recommended for use in forcemeat and for flavouring.

Having discussed sweet herbs in general, their cultivation and propagation, how to harvest them and prepare them either for market or for home consumption, it now remains to deal with each herb separately. Though a description of each will be given with its botanical and history, cultivation and uses in the kitchen, the medicinal properties and uses of the herbs will be found but lightly

touched on, as these will be found given at length in the special pamphlets dealing with each herb that have already been issued. (Post free 7½d. each pamphlet. See list published.)

PLANT LIST.

ANGELICA.—*Archangelica Officinalis* (Hoffm.) ;
syn. *Angelica Archangelica* (Linn.).

Angelica is among those medicinal plants which grow wild, yet are only of market value when cultivated. The large variety is grown abundantly near London in moist fields for the use of its candied stems by confectioners. It is largely cultivated for medicinal purposes in Thuringia, and the roots are also imported from Spain. It is believed to be a native of Syria, whence it has spread to many cool European climates, especially Lappland and the Alps, where it has become naturalised. There are about thirty varieties, but the above named is the only one officially employed. The virtues of the herb are quaintly phrased by old writers, and the name itself, as well as the folk-lore of all North European countries and nations, testify to the great antiquity of a belief in its merits as a protection against contagion, for purifying the blood, and for curing almost every conceivable malady. In Courland, Livonia and the Low lake lands of Pomerania and East Prussia, wild growing Angelica abounds; there, in early summer time it is the custom of some peasants to march into the towns carrying the Angelica flower stems to offer them for sale, chanting some ancient ditty in Lettish words, so antiquated as to be unintelligible to the singers themselves. The chanted words and the tune are learnt in childhood, and may be attributed to a survival of some pagan festival. Later, the plant became linked in the popular mind with some Archangelic patronage, and associated with the spring-time festival of the Annunciation.

Description. Angelica is a member of the natural order *Umbelliferæ*. It may be termed a perennial herbaceous plant. It is biennial only in the botanical sense of the term, that is to say, it is neither annual nor naturally perennial; the seedlings make but little advance towards maturity within 12 months, whilst old plants die off after seeding once, which event may be at a much more remote period than in the second year of growth. Only very

advanced seedlings flower in their second year, and the third year of growth commonly completes the full period of life. There is another species, **Angelica Heterocarpa**, which is credited with being truly perennial: it flowers a few weeks later than the biennial species and is not so ornamental in its foliage.

The roots of the common **Angelica** are long, spindle-shaped and fleshy—large specimens weighing sometimes as much as three pounds. The stems are stout, fluted, 4 to 6 ft. high and hollow; the foliage is bold and pleasing, the leaves are on long, stout, hollow foot-stalks, often 3 ft. in length, reddish purple at the clasping bases; the blades, of a bright green colour, are much cut into, being composed of numerous small leaflets, divided into three different groups, each of which is again subdivided into three lesser groups. The edges of the leaflets are finely toothed or serrated. The flowers, small and numerous, yellowish or greenish in colour, are grouped into large roundish umbels. They blossom in July, and are succeeded by pale yellow, oblong fruits, with membranous edges, flattened on one side and convex on the other, which bears three prominent ribs.

Our native form, **Angelica Sylvestris**, is hairy in stalk and stem to a degree which makes a well marked difference. Its flowers differ, also, in being white.

Angelica is unique amongst the **Umbelliferæ** with its pervading aromatic odour, a pleasant perfume, entirely differing from Fennel, Parsley, Anise, Caraway or Chervil. One old writer strangely compared it to musk, others to Juniper. Even the roots are also fragrant.

In several London Squares and Parks, **Angelica** has continued to grow, self sown, for several generations as a garden escape, often unrecognised by the multitude; in some it is appropriated as a useful foliage plant, in others, it is treated rather as an intruding weed. Before the building of the London Law Courts and the clearing of much sham property between Holywell Street and Seven Dials, the foreign population of that district fully appreciated its value, and were always anxious to get it from Lincoln's Inn Fields, where it abounded and where it still grows. Until very recent years, it was exceedingly common on the slopes bordering, and Tower of London on the north and west sides; there also, the inhabitants held the plant in high repute for culinary use and for its hygienic merit.

Cultivation. Cultivate in ordinary deep moist loam, in a shaded position, as the plant thrives best in a damp soil and loves to grow near running water. Although its natural habitat is in damp soil and in open quarters, yet it can withstand adverse environment wonderfully well and even endure severe winter frost without harm. Seedlings will even successfully develop and flower under trees whose shelter creates an area of summer dryness in the surface soil, but, of course, though such conditions may be allowable when *Angelica* is grown merely as an ornamental plant, it must be given the best treatment as regards suitable soil when grown for its use commercially. Insects and garden pests do not attack the plant with much avidity; its worst enemy is a small two-winged fly, of which the maggots are leaf-miners, resembling those of the Celery plant and of the Spinach leaf.

Propagation should not be attempted otherwise than by the sowing of ripe, fresh seed, though division of old roots is sometimes recommended, and also propagation by off-shoots, which are thrown out by a two-year plant when cut down in June for the sake of the stems, and which transplanted to 2 feet or more apart will provide a quick method of propagation, considered inferior however, to that of raising by seed.

Since the germinating capacity of the seeds rapidly deteriorates, they should be sown as soon as ripe in August or early September. If kept until March, especially if stored in paper packets, their vitality is likely to be seriously impaired. In the autumn, the seeds may be sown where the plants are to remain, or preferably in a nursery bed, which as a rule will not need protection during the winter. A very slight covering of earth is best. Young seedlings, but not the old plants, are amenable to transplantation. The seedlings should be transplanted when still small, for their first summer's growth to a distance of about 18 ins. apart. In the autumn they can be removed to permanent quarters, the plants being then set 3 ft. apart.

If well grown, the leaves may be cut for use the summer after transplanting. Ordinarily it is in the third or fourth year that the plant develops its tall flowering stem, of which the gathering for culinary or confectionery use prolongs the life-time of the plant for many seasons. Unless it is desired to collect seed, the tops should be cut at or before flowering time. After producing seed the plants generally die, but by cutting down the tops when the flowerheads

first appear and thus preventing the formation of seed, the plants may continue for several years longer. By cutting down the stems right at their base the plants practically become perennial, by the development of side shoots around the stool head.

If the seeds are required, they should be gathered when ripe and treated as described on page 15.

The stem, which is in great demand when trimmed and candied, should be cut about June or early July.

Uses. Angelica is largely used in the grocery trade as well as for medicine, and is a popular flavour for confectionery and liqueurs. The appreciation of its unique flavour was established in ancient times when saccharin was extremely rare.

The preparation of Angelica is a small but important industry in the south of France, its cultivation being centralised in Clermont-Ferrand. Fairly large quantities are purchased by confectioners, and high prices are always easily obtainable. The flavour of Angelica distinctly suggests that of Juniper berries, as already mentioned, and it is largely used in combination with Juniper berries, or in partial substitution for them, by gin distillers. The stem is largely used in the preparation of preserved fruits and "confitures" generally, and is also used as an aromatic garnish by confectioners. The roots, leaves and seeds are used either in infusion or teas medicinally. The seeds, especially, which are aromatic and bitterish, are employed as alcoholic distillates, especially in the preparation of Vermouth and similar preparations, as well as in liqueurs, notably Chartreuse, and to a small extent in perfumery. From most ancient times, Angelica has been one of the chief flavouring ingredients of beverages and liqueurs, but probably it will be known only to a few people that the Muscatel Grape-like flavour of some wines made on both sides of the Rhine is (or is suspected to be) due to the secret use of Angelica. An Oil of Angelica, which is very expensive was prepared in Germany some years ago; it is obtained in smaller quantity from the roots, 200 lbs. of which, it is said, yield only about 1 lb. of the oil. Like the seeds, the oil is used for flavouring.

Though the tender leaflets, or blades of the leaves, have sometimes been recommended as a substitute for spinach, they are too bitter for the general taste, but the branched mid-ribs of the leaf, boiled and used as a celery, are delicious, and Icelanders eat both

the stem and the roots raw, with butter. The taste of the juicy raw stems is at first sweetish and slightly bitter in the mouth, and then gives a feeling of glowing warmth. The Finns eat the young stems baked in hot ashes, and an infusion of the dried herb is drunk either hot or cold: the flavour of the decoction is rather bitter, the colour is a pale-greenish grey, and the odour greatly resembles China Tea. Another old practice is to put a portion of the herb into the pot in which fish is boiled.

The Norwegians make bread of the roots. The roots form one of the principal aromatics of European growth; the other parts of the plant have the same flavour, but their active principles are considered more perishable.

Gerarde says of Angelica: "If you do but take a piece of the root and hold it in your mouth, or chew the same between your teeth, it doth most certainly drive away pestilent aire."

If an incision is made in the bark of the stems and crown of the root, at the commencement of the spring, a resinous gum exudes, with aromatic flavour, similar to musk or benzoin, for either of which it can be substituted.

If a small quantity of the leaf-stalks of Angelica be cooked with "sticks" of Rhubarb, the flavour of the compound will be acceptable to many who do not relish plain Rhubarb. The quantity of Angelica used may be according to circumstances, conditions and individual taste. If the stems are young and juicy, they may be treated like Rhubarb and cut up small, the quantity used being any proportion between 5 and 25 per cent. If the stalks are more or less fully developed, or even rather old and tough, they can be excellently used in economically small quantities for flavouring large quantities of stewed Rhubarb, or Rhubarb Jam, being added in long lengths before cooking and removed before sending to table. The confectionery's candied Angelica may be similarly utilised, but is extremely expensive and not so good, whilst the home-garden growth in spring time of fresh Angelica, with thick, stout leaf-stalks and of still stouter flowering stems, is very easy and cheap. If this flowering stem be cut whilst very tender early in May, later leaf-stalks will be plentifully available for use with the latter part of the Rhubarb crop.

The late Mr. Robertson, jam maker and confectioner of Chelsea, won considerable reputation by reason of his judicious

blending of Angelica in jam making and its combination in other confections, including temperance beverages.

A pleasant form of Hop Bitters is made by taking 1 oz. of Dried Angelica herb, combined with 1 oz. Hole Thistle and $\frac{1}{2}$ oz. Hops, infused with three pints of boiling water, and strained off when cold, a wineglassful being taken several times a day, before meals, and forming a good appetiser.

To Preserve Angelica. Cut in pieces 4 ins. long, steep for 12 hours in salt and water. Put a layer of cabbage or cauliflower leaves in a clean brass pan, then a layer of Angelica, then another layer of leaves and so on, finishing with a layer of leaves on the top. Cover with water and vinegar. Boil slowly till the Angelica becomes quite green, then strain and weigh the stems. Allow 1 lb. loaf sugar to each pound of stems. Put the sugar on in a clean pan with water to cover; boil 10 minutes, and pour this syrup over the Angelica. Stand for 12 hours. Pour off the syrup, boil it up for five minutes and pour it again over the Angelica. Repeat the process; and after the Angelica has stood in the syrup 12 hours, put all on the fire in the brass pan and boil till tender. Then take out the pieces of Angelica, put them in a jar and pour the syrup over them, or dry them on a sieve and sprinkle them with sugar: they then form candy.

ANISE: *Pimpinella anisum* (Linn).

Anise is a little umbelliferous annual, highly valued as a cultivated crop prior to our era, both in Palestine and other parts of the East. It is a native of Egypt, Greece, Crete and Asia Minor, was cultivated by the ancient Egyptians and well known to the Greeks and Romans. Pliny tells us that "Both green and dried, it is held in high repute as an ingredient in all seasonings and sauces, and is also placed beneath the mastication of bread." In the Middle Ages, its cultivation spread to central Europe. In this country, Anise has been in use since the 14th century, and has been an inhabitant of English gardens from the middle of the 16th century, but it ripens its seeds here only in very warm summers, and it is chiefly in warmer countries that it is grown on a commercial scale, Southern Russia, Bulgaria, Germany, Malta, Spain, Italy, Greece and North Africa producing large quantities. It has also been introduced into India and South America. The cultivated plant attains a considerably larger size than the wild one.

Description. It is a dainty little plant, its slender stems about 18 inches high, erect, branched and cylindrical, arising from a white, spindle-shaped and rather fibrous root. Its root-leaves are lobed, somewhat like those of celery, but its stem-leaves are more and more finely cut towards the upper part of the stem, near the top of which their segments become very finely divided, like those of Fennel. Its flowers are small, of a yellowish white, in loose umbels formed of many umbellules. The fruits (popularly called "seeds") are greenish-grey, oblong in shape and furrowed and ridged, of an aromatic and agreeable odour and sweet and spicy taste.

Cultivation. Sow the seed, which should be as fresh as possible, never more than two years old, in dry, light soil, on a warm, sunny border, early in April, where the plants are to remain. When they are about 2 inches high, thin them, allowing about a foot each way. The seeds may also be sown in pots in heat, and removed to a warm site in May, but the plants do not transplant readily.

When planting on a commercial scale, sow in drills, 15 to 18 inches apart, and thin out to 6 inches apart in the rows. An ounce of seed should plant about 150 feet of drills, if the seeds are sown about $\frac{1}{2}$ inch apart. A light application of well-rotted manure, careful preparation of the ground, and keeping clean from weeds are all that is required.

The seeds will ripen in England in good seasons if planted in a warm and favourable situation, though not successful everywhere, and can hardly be looked upon as a remunerative crop. The plant flowers in July, and if the season prove warm, will ripen in autumn, in about 4 months from the sowing of the seed, and in about 1 month from the appearance of the flowers, when the plants are cut down and the seeds threshed out.

Uses. In Virgil's time, Anise was used as a spice. Mustacæ, or spiced cakes of the Romans, introduced at the end of a rich meal, to prevent indigestion, consisted of meal, with Anise, Cummin and other aromatics. Such a cake was sometimes brought in at the end of a marriage feast, and is, perhaps, the origin of our spiced Wedding cake.

On the Continent, especially in Germany, many cakes have an aniseed flavouring, and Anise is also used in a flavouring for soups, and is an ingredient of various condiments, especially curry powders, and is also used to flavour some kinds of cheese and bread.

The ground seeds also form one of the ingredients of sachet powders.

Anise fruit yields on distillation a fragrant, syrupy, volatile oil, that is nearly colourless, about 50 lbs. of seed being required to produce 1 lb. of oil. It is largely employed in France, Spain, Italy and South America in the preparation of cordial liqueurs. The liqueur Anisette, made by mixing the oil with spirits of wine, added to cold water on a hot summer's day, is a most refreshing drink. It has a benedict action on the bronchial tubes, and is an immediate palliative for bronchitis and spasmodic asthma, if administered in hot water.

Anise enjoys a considerable reputation as a medicine in coughs and pectoral affections. It is greatly used in the form of lozenges, and the seeds have also been used for smoking to promote expectoration.

Anise oil is a good antiseptic, and is used mixed with oil of Peppermint or Wintergreen to flavour aromatic liquid dentifrices. It is also mixed with other fluids for liquid perfumes, and largely used in perfuming soaps, pomatus and other toilet articles.

The oil is said to prove a capital bait for mice, if smeared in traps. It is poisonous to pigeons. It destroys lice and the itch insect, a lining mixed with lard for the purpose and made into an ointment.

At Erfurt in Germany, where much of the commercial oil is made, the whole plant and the seeds are both used for distilling.

The powdered seed is largely used in colicition pills and other cathartics for horses.

The *SEEDS*, applied externally, are said to help to remove warts. They have been recently employed as a garnish for flavoured salads, and to a limited extent as a pot herb.

BALM. *Melissa Officinalis* (Linn.).

Balm, also known as Sweet Balm and Lemon Balm, is a well-known perennial plant belonging to the order **Labiatae**.

The word Balm is an abbreviation of Balsam, the chief of sweet-scenting oils. It is so called from its homely sweetness. The generic name **Melissa** is Greek for **bee**, given it in allusion to

the fondness of bees for the abundant nectar stored in its flowers. Gerard says: "It is profitably planted where bees are kept. The hives of bees being rubbed with the leaves of bawme, causeth the bees to keep together, and causeth others to come with them." And again, quoting Pliny, "When they are strayed away, they do find their way home by it."

It is a native of Southern Europe, where over, 2,000 years ago it was cultivated as a source of honey and as sweet herb, and it is frequently mentioned in the Greek and Latin classics. It has been introduced as a garden plant into nearly all temperate climates

Description. The root-stock is short, the roots small and fibrous; the stem, square and branching, grows 1-2 feet high, and has at each joint pairs of broadly heart-shaped, toothed leaves, which emit a fragrant lemon odour when bruised. They also have a distinct lemon taste. The flowers, white or yellowish, are in loose, small, one-sided clusters from the axils of the leaves, and bloom from June to October. The plant dies down in winter, but the root is perennial. The seeds are very small, more than 50,000 to the ounce.

Cultivation. Balm grows freely in any soil and can be propagated by seeds sown in May, and by cuttings or division of roots in spring or autumn; if in autumn, preferably not later than October, so that the offsets may be established before the frosts come on. The roots may be divided into small pieces, with three or four buds to each, and planted two feet apart in ordinary garden soil. The only culture required is to keep them clean from weeds and to cut off the decayed stalks in autumn, and then to stir the ground between the roots.

The seeds germinate fairly well, even when four years old. Owing to their small size, they should be planted in a seed-pan in a greenhouse in very fine and friable soil, on the surface of which they are merely pressed. When an inch tall, they should be pricked out 2 inches apart in shallow boxes, and when 4 inches tall set out in the open, in rows 18 inches apart and 1 foot apart in the rows. When once established, they may be increased readily by cuttings, layers, or division of roots.

The foliage of seedling plants, or plants spring set, should be ready for use by mid-summer; that of established plants from early spring until late autumn.

For home use and market, the foliage should be dried as directed, but the more succulent stems not in bunches over strings but laid on trays or sieves, thinly spread. The temperature should be rather low.

Uses. The foliage is widely used for flavouring soups, stews, sauces and dressings, and when fresh, to a small extent, with salads.

Balm was formerly esteemed of great use in all complaints supposed to proceed from a disordered state of the nervous system, a medicinal power that is no longer ascribed to it. The London Dispensary (1696) said: "An essence of Balm, given in Canary wine, every morning will renew youth, strengthen the brain, relieve languishing nature and prevent baldness." John Evelyn wrote: "Balm is sovereign for the brain, strengthening the memory and powerfully chasing away melancholy." Balm steeped in wine we are told again, "comforts the heart and driveth away melancholy and sadness." All this effect may not have been due to the Balm alone, but Balm is still used as an ingredient in cups. Formerly a spirit of Balm, combined with lemon-peel, nutmeg and angelica root, enjoyed a great restorative reputation under the name of Carmelite water, being deemed highly useful against nervous headache and neuralgic affections. Gerarde also tell us: "The juico of Balm glneth together greene wounds" and gives the opinion of Pliny and Dioscorides that "Balm, being applied, doth close up wounds without any peril of inflammation."

It is now understood as a scientific fact that the balsamic oils of aromatic plants made excellent surgical dressings; they give off ozone, and thus exercise anti-putrescent effects, the resinous parts of these balsamic oils, as they dry upon the sore or wound, seal it up and effectually exclude all noxious air. Thus the essential oils of Balm, Peppermint, Lavender and similar herbs, as well as Pine Oil, the resin of Turpentine and Benzoin (Friar's Balsam) serve admirably for ready application on lint or soft rags to cuts and superficial sores.

Balm is considered by herbalists to be very useful, either alone, or in combination with other herbs, and excellent in colds attended with fever, as it induces a mild perspiration and makes a pleasant and cooling tea for feverish patients in cases of catarrh and influenza. To make Balm Tea, pour one pint of boiling water on one ounce of herb, infuse 15 minutes, allow to cool, then strain, and drink freely.

SWEET BASIL.—*Ocimum Basilium* (Linn.).**BUSH BASIL.**—*O. Minimum*.

Common or Sweet Basil, which is used in medicine and also for culinary purposes, especially in France, is an annual, belonging to the order **Labiatae**. The plant is a native of tropical Asia, where for centuries, especially in India, it has been highly esteemed as a condiment. It was introduced into England about the middle of the 16th century.

The derivation of the name Basil is uncertain. Some say it comes from the Greek *basileus*, a king, for some reason unknown, unless as Parkinson says, because "the smell thereof is so excellent that it is fit for a king's house," or it may have been termed royal, because used of old in some regal unguent, or bath, or medicine.

In France, it is known as **Herbe Royale**, royal herb. The generic name is derived from **Oza**, a Greek word signifying odour.

Boccacio's story of Isabella and the Pot of Basil, immortalised for us by the pen of Keats and the brush of Rossetti, keeps the plant in our memory, though it is now somewhat rarely seen cultivated in this country. It was formerly a more frequent denizen of English herb gardens, for Tusser includes it among the Strewing herbs, and Drayton places it first in order, when enumerating the herbs in his poem *Polyolbion*.

"With Basil then I will begin
Whose scent is wondrous pleasing."

In Tudor days, little pots of Basil were often given as graceful compliments by farmers' wives to visitors and their landladies. Parkinson says of it: "The ordinary Basil is in a manner wholly spent to make sweete or washing waters among other sweet herbs, yet sometimes it is put into nosegays. The Physicall properties are to procure a cheerfull and merry hearte whereunto the seeds is chiefly used in powder."

Description. Sweet Basil is a hairy plant growing about three feet high. The stem is obtusely quadrangular, the labiate flowers are white, in whorls in the axils of the leaves, the calyx with the upper lobe rounded and spreading. The leaves, greyish-green beneath and dotted with dark oil cells, are opposite, one inch long

and one-third inch broad, stalked and peculiarly smooth, soft and cool to the touch, very slightly toothed, and if slightly bruised exale a very delightful scent of cloves.

There are several varieties, differing in the size, shape, odour and colour of the leaves. The Common Basil has very dark green leaves, the curled-leaved has short spikes of flowers, the narrow-leaved smells like Fennel, another has a scent of citron, another somewhat of a Tarragon scent. Lettuce-leaved Basil has large pale-green, wrinkled leaves like those of lettuce; Purple Basil has lilac flowers, and, grown in strong sun, purple leaf-stems and young branches.

Cultivation. Basil dies down every year in this country, so that the seeds have to be sown annually. If in a very warm sheltered spot, seeds may be sown in the open, about the last week in April, but they are a long time coming up, and as they are very small (about 23,000 to the ounce) it is preferable to sow in a hot bed, about the end of March, and remove to a warm border in May, planting 10 ins. to a foot apart. Basil flourishes best in a rich soil and sunny situation.

First gatherings of foliage should begin by mid-summer, when the plant starts to blossom. Then they may be cut to within a few inches of the ground. A second or even a third crop may be obtained if care is taken to keep the surface clean and open. A little dressing of quickly available fertiliser applied at the time is helpful. Some of the best plants should be left uncut for seed, which should ripen by mid summer.

For winter use of the fresh leaves, plants may be transplanted from the garden into frames, or seedlings may be started in September. The seeds should be sown 2 to the inch and the seedlings transplanted to pots or boxes, in the latter 5 or 6 inches apart each way.

Basil is chiefly used fresh, but may also be dried in the manner already described, being gathered in July, and stored dry for winter use.

In common with other labiates, Basil, both the wild and the sweet, furnishes an aromatic, volatile, camphoraceous oil, and on this account is much employed in France for flavouring soups, especially turtle soup, which derives its peculiar taste chiefly from

the clove-like flavour of Basil. The French also use it in ragouts and sauces. The leafy tops are a great improvement to salads and cups.

Although it is now comparatively little used in England for culinary purposes, this herb was one of our favourite potherbs in older days, and was employed by giving the distinctive flavour that once made Fetter Lane sausages famous.

The golden-yellow essential oil, which is extracted from the leaves, is used in perfumery more than in the kitchen.

Though the chief use of Basil is in cooking for flavouring, it has occasionally been used medicinally for mild nervous disorders and for the alleviation of rheumatic pains, the dried leaves, in the form of snuff, being said to be a cure for nervous headaches.

Bush Basil, **Ocymum Minimum**, is a low bushy plant, seldom above six inches in height, much smaller and more compact than Sweet Basil.

The leaves are ovate, quite entire, the flowers in whorls towards the top of the branches, smaller than those of Sweet Basil, and seldom succeeded by ripe seeds in England.

There are two varieties, one with dark purple leaves and the other with variable leaves.

Bush Basil may occasionally live through the winter in this country, though Sweet Basil never does.

Both varieties flower in July and August.

The leafy tops of Bush Basil are used in the same manner as the Sweet Basil for seasoning and in salads.

An allied species, **Ocymum Viride**, the Mosquito Plant of West Africa and the West Indies, is likely to prove of value in medicine as a new source of Thymol, the valuable antiseptic, as it has lately been found to yield 35 to 1·2 of oil, from which 32 to 65 per cent. of Thymol can be extracted.

BAY LAUREL.—Laurus Nobilis (Linn.).

The foliage of the Sweet Bay or Bay Laurel (*Laurus Nobilis*) which is in this country only a large, hardy shrub, but in Southern Europe becomes a tree, 20-30 feet in height, is very aromatic, and

is much used for culinary purposes, for flavouring soups, stews, sardines, figs, etc.

Care must be exercised not to use in error the leaves of the Cherry Laurel, which have sometimes been mistaken for those of the Bay Laurel for flavouring, with disastrous results; they are full of prussic acid, and the water distilled from them is a virulent poison.

An oil is expressed from the berries of the Sweet Bay, *Oleum Laurinum*, used medicinally as a local application for Rheumatism, and also to communicate a pleasant odour to external remedies. An infusion was also formerly made of the leaves and berries as a stomachic, but they are now rarely used internally as medicines.

In classic days, when the people crowded into Rome during the time of the Italian plague, they were all recommended to go to *Laurentinum* (now San Lorenzo) because the Sweet Bay there grew in great abundance, and the inhalation of air impregnated with its odours was considered a sure prevention against infection.

The Essential Oil of Bay is not distilled from the Sweet Bay, but from the fresh leaves of *Pimenta Acris*, a native of the West Indies. It is not used internally, but solely for making Bay Rum and Florida Water for toilet articles.

BORAGE. *Borago Officinalis* (Linn.).

The Common Borage is a hardy annual plant, coming originally from Aleppo, but now naturalised in most parts of Europe and frequently found in this country, though mostly only on rubbish heaps and near dwellings, and generally to be regarded as a garden escape. It belongs to the order Boraginaceæ.

It has long been grown freely in kitchen gardens, both for its uses as a herb and for the sake of its flowers, of which bees are very fond, as it yields much excellent honey.

Description. The whole plant is rough with white, stiff, prickly hairs. The round stems, about a foot and a half high, are branched, hollow and succulent; the leaves, alternate, large, wrinkled, deep green, oval and pointed, 3 in. long or more, and about 1½ inch broad, the lower ones stalked, with stiff, one-celled hairs on the upper surface and on the veins below, the margins entire, but wavy. The flowers which terminate the cells, are bright blue and star-shaped, distinguished from those of every plant in this

order by their prominent black anthers, which form a cone in the centre and have been described as their beauty spot. The fruit consists of four brownish-black nutlets. The seeds retain their vitality for about eight years. The flowers are sometimes pink, violet-red, and even white.

Cultivation. Borage flourishes in ordinary soil, and no plant is more easily grown. It may be propagated by division of root-stocks in spring, and by putting cuttings of shoots in sandy soil in a cold frame in summer and autumn, or from seeds sown in fairly good, light soil, from the middle of March to May, in drills 18 inches apart, the seedlings being thinned out to about 15 inches apart in the rows. If left alone, Borage will seed itself freely and comes up year after year in the same place. Seeds may also be sown in the autumn. Those sown then will flower in May, whereas those sown in the spring will not flower till June.

The fresh herb has a cucumber-like fragrance. When steeped in water, it imparts a coolness to it and also a faint cucumber flavour, and compounded with lemon and sugar in wine, with water, it makes a refreshing and restorative summer drink. It was formerly always an ingredient in cool tankards of wine and cider, and is still largely used in claret cup.

Our great grandmothers preserved the flowers and candied them.

In the early part of the nineteenth century, the young tops of Borage were still sometimes boiled as a potherb, and the young leaves were formerly considered good in salads.

Gerarde tells us: "Pliny calls it Euphrosinum, because it maketh a man merry and joyfull: which thing also the old verse concerning Borage doth testifie:

Ego Borago
Gaudia semper ago.

I, Borage
Bring alwaies courage.

Those of our time do use the flowers in sallads to exhilarate and make the mind glad. There be also many things made of these used everywhere for the comfort of the heart, for the driving away of sorrow and increasing the joy of the minde. The leaves and floures of Borage put into wine make men and women glad and merry and drive away all sadnessse, dulnesse and melancholy, as Dioscorides and Pliny affirme. Syrup made of the floures of Borage comforteth the heart, purgeth melancholy and quieteth the phren-

ticke and lunaticke person. The leaves eaten raw ingender good blood, especially in those that have been lately sicke." The stems and leaves supply much saline mucilage, which when boiled and cooked likewise deposits nitre and common salt. It is to these saline qualities that the wholesome invigorating effects and specially recruiting properties of Borage are supposed to be due, as they promote the activity of the kidneys.

Borage flowers are also dried for mixing with Pot Pourri, mainly for the sake of their bright blue colour. They should be collected as early as possible before expansion, but when fully formed, otherwise they soon lose their colour, and must not be allowed to lie in heaps before drying. Lay them on trays in thin layers in a current of air as soon as possible after gathering.

BURNET.—*Poterium Sanguisorba* (Linn.).

The Garden or Salad Burnet a member of the natural order **Rosaceae**, is assigned to the genus **Poterium**, which name is derived "poterion" a drinking cup, from the use to which its leaves were applied in the preparation of the numerous beverages with which the "poterion" was filled in ancient times.

It is common in dry pastures and by the wayside, especially on chalk and limestone, but is rarer in Scotland and Ireland than in England.

Description. The Salad Burnet is an elegant, little plant, its stems rising about a foot high, its leaves being on long stalks bearing 5-10 pairs of sharply toothed leaflets. The flowers are in oblong heads, on long stalks, with 4 toothed, coloured membranous calyces, with crimson tufted stigmas, and the lower ones with 30-40 stamens having very long drooping filaments. Both the flower and leaf stalks are of deep crimson colour.

Cultivation. It is easily propagated by seeds, sown in autumn, soon after they are ripe. If the seeds be permitted to scatter, the plants will come up plentifully, and can be transplanted into an ordinary or rather poor soil, at about a foot distant each way. If kept clear from weeds, they will continue some years without further care, especially if the soil be dry. Propagation may also be effected by division of roots in spring or autumn.

When used for salad, the flower-stalks should be cut down if not required for seed. The leaves, for salad used, should be cut young, or may be tough.

Uses. In the herb gardens of older days, the Salad Burnet always had its place. Bacon recommends it to be set in alleys together with wild thyme and water mint, to perfume the air most delightfully, being trodden on and crushed."

The leaves when bruised smell like cucumber and taste somewhat like it, and from this property it was reckoned among the salad herbs and used to be put into cool tankards in the same manner as Borage, though it has gone out of fashion and as a kitchen-herb is now much neglected.

The older herbalists held this plant in greater repute than it enjoys at the present day as a drug. Pliny recommended it for divers complaints. Culpepper tells us that the continued use of it "preserves the body in health and the spirit in vigour"—that it is "a friend to the heart and liver," and that two or three of the stalks, with their leaves, put into a cup of wine "will quicken the spirit, refresh and clear the heart, and drive away melancholy." "It gives a grace in the drynkyng," says Gerarde, referring to this use of it in cool tankards.

Turner advised the use of the herb, infused in wine or beer, for the cure of gout and rheumatism.

CARAWAY.—*Carum Carvi* (Linn.).

Caraway is another member of the group of aromatic, unbeliferous plants characterised by having carminative properties, like Anise, Cumin, Dill and Fennel. It is grown, however, less for the medicinal properties of the fruits, or so-called "seeds," than for their use as a flavouring material in cookery, confectionery and liqueurs.

The plant is distributed throughout the northern and central parts of Europe and Asia, though where it occurs in this country, it is only considered a naturalised species, having apparently escaped cultivation.

Caraway was well known in far-off classic days, and it is believed that its use originated with the ancient Arabs, who called the "seeds" *Karawayya*, a name they still bear in the East, and clearly the origin of our word Caraway.

Description. It is a biennial, with smooth, furrowed stems, growing 1½ to 2 ft. high, bearing finely cut leaves, and umbels

of white flowers which blossom in June. The fruits—which are popularly and incorrectly called seeds—and which correspond in general character to those of the other plants of this large family, are laterally compressed, somewhat horny and translucent, slightly curved, and marked with five distinct, pale ridges. They evolve a pleasant, aromatic odour when bruised, and have an agreeable taste.

The leaves possess similar properties and afford an oil identical with that of the fruit, though it is not made use of.

Cultivation. Caraway does best when the seeds are sown in the autumn, as soon as ripe, though they may be sown in March. Sow in drills, 1 ft. apart, the plants when strong enough, being thinned out to about 8 ins. in the rows. The ground will require an occasional hoeing to keep it clean and assist the growth of the plants. From an autumn-sown crop, seeds will be produced in the following summer, ripening about August.

When the fruit ripens the plants are cut about 12 ins. above the ground with sickles, and the Caraways are separated by threshing. They can be dried either on trays in the sun, or by very gentle heat over a stove, shaking occasionally.

Although Caraway is indigenous to all parts of Europe, Siberia, Turkey in Asia, Persia, India and North Africa, yet it is cultivated only in a few comparatively restricted areas. It grows wild in many parts of Canada and the United States, but is nowhere grown there as a field or garden crop. Its cultivation is restricted to relatively small areas in England, Holland, Germany, Finland, Russia, Norway and Morocco, where it constitutes one of the chief agricultural industries within its narrow confines. It has so far received comparatively little attention in England, where it is grown only in Essex, Kent and Suffolk, upon old grass land broken up for the purpose. Holland cultivates the main crop, producing and exporting far larger quantities than any other country.

Dutch Caraway is preferred among consumers in the United States, and the bulk used there comes from Holland. Morocco produces a grade of Caraway that comes regularly into the English and American markets, but is somewhat inferior in quality. During the last year or two there has been a scarcity of Caraway, owing partly to the fact that the extensive area of land in Holland usually employed for the cultivation of the plant was devastated by floods towards the close of 1915. Moreover, the exportation of Caraway

from Holland was forbidden. The Cultivation of Caraway plants has therefore been advised as likely to be profitable, as on account of the ruling scarcity the price of Caraway seed became double what it was before the war. Much Dill seed was sold in its place, especially Indian Dill seed. In 1918, a small grower reported that she had netted £5 from growing Caraway on a corner of what otherwise would have been waste ground.

Uses. The tender leaves in spring have been boiled in soup to give it an aromatic flavour, and occasionally the leaves and young shoots have been used as an ingredient in salads.

The roots are thick and tapering, like a parsnip, though much smaller and are edible. Parkinson declared them, when young, to be superior in flavour to Parsnips. Mixed with milk and made into bread, they are said to have formed the "Chara" of Julius Cæsar, eaten by the soldiers of Valerius. It is the seeds, however, that are the important part.

Caraway is frequently mentioned by the old writers. In the Middle Ages and in Shakespeare's time it was very popular, and was more freely used in this country than in our own days. "The seed," says Parkinson, "is much used to be put among baked fruit, or into bread, cakes, etc., to give them a relish. It is also made into comfites and taken for cold or wind in the body, which also are served to the table with fruit." In *Henry IV., Second part*, Squire Shallot invites Falstaff to "a pippin and a dish of caraways." The custom of serving roast apples with a little saucerful of Caraway is still kept up at Trinity College, Cambridge, and at some of the old-fashioned London Livery Dinners, just as in Shakespeare's days—and in Scotland to this day a saucerful is put down at tea to dip the buttered side of bread into and called "salt water jelly." I have not yet come across the reason of its getting this name.

The scattering of the seed over cakes has long been practised, and Caraway-seed cake was formerly a standing institution at the feasts given by farmers to their labourers at the end of the wheat sowing. The little Caraway comfites consist merely of the seeds encrusted with white sugar. In Germany, the peasants flavour their cheese, cabbage, soups, and household bread with Caraway, and in Norway and Sweden, polenta-like, black, Caraway bread is largely eaten in country districts and is delicious.

The oil extracted from the fruits is used as an ingredient of

alcoholic liqueurs: both the Russians and the Germans make from Caraway a liqueur, "Kummel," and Caraway enters into the composition of *l'huile de Venus* and other cordials.

From 6 lbs. of the unbruised seeds, 4 oz. of the pure essential oil can be expressed.

The exhausted seed, after the distillation of the oil, contains a high percentage of protein and fat, and is used as a cattle food.

Both fruit and oil possess aromatic, stimulant and carminative properties. Caraway was widely employed at one time as a carminative cordial, and was recommended in dyspepsia, and symptoms attending hysteria and other disorders. It possesses some amount of tonic property and forms a pleasant stomachic. Its former extensive employment in medicine has much decreased in recent years, and the oil and fruit are now principally employed as adjuncts to other medicines as corrective or flavouring agents, combined with purgatives. For flatulent indigestion, however, from 1-4 drops of the essential oil of Caraway given on a lump of sugar, or in a teaspoonful of water, will be found efficacious. Distilled Caraway water is considered, moreover, a useful remedy in the flatulent colic of infants, and is an excellent vehicle for children's medicine. When sweetened, its flavour is agreeable.

The flavour of the oil differs slightly in different varieties, the North Russian being preferred for the preparation of Kummel, while the oil distilled from the Tunis variety of Caraway is of less pleasant flavour than the Dutch and English Caraways, and is mainly used for perfuming soaps, such as Brown Windsor soap.

The home-grown Caraway is considered the best: the seeds are of a brighter tint than the other varieties.

CATMINT. — *Nepeta Cartaria* (Linn.).

Catmint or Catnep, a wild English plant belonging to the large family *Labiata*, is generally distributed throughout the central and the southern counties of England, in hedgerows, borders of fields, and on dry banks and waste ground, especially in chalky and gravelly soil. It is less common in the north, very local in Scotland and rare in Ireland, but of frequent occurrence in the whole of Europe and temperate Asia, and also common in North America, where originally, however, it was an introduced species.

Description. The root is perennial and sends up square, erect and branched stems, 2-3 ft. high, which are very leafy and covered with a mealy down. The heart-shaped, toothed leaves are also covered with a soft, close down, especially on the under sides, which are quite white with it, so that the whole plant has a hoary, greyish appearance, as though it had had dust blown all over it.

The flowers grow on short footstalks in dense whorls, which towards the summit of the stem are so close as almost to form a spike. They are in bloom from July to September. The individual flowers are small, the corollas two-lipped, the upper lip straight, of a whitish or pale pink colour, dotted with red spots, the anthers a deep red colour. The calyx tube has 15 ribs, a distinguishing feature of the genus *Nepeta*, to which this species belongs.

The plant has an aromatic, characteristic odour, which bears a certain resemblance to that of both Mint and Pennyroyal. It is owing to this scent that it has a strange fascination for cats, who are so fond of the odour of this herb that they will destroy any plant of it that may happen to be bruised, so as to emit its peculiar pungent scent, rolling on it, tearing it to pieces and chewing it with the greatest pleasure, seeming to delight in the scent almost as much as in that of Valerian.

Cultivation. Catmint is easily grown in any garden soil, and does not require moisture in the same way as the other Mints. Seeds can be sown either in autumn or spring, where the plants are to remain, thinning out the seedlings to about 20 ins. apart each way. They require no attention, and will last for several years if the ground is kept free from weeds. The germinating power of the seeds lasts five years. The stock may also easily be increased by dividing the plants in spring.

Uses. The herb was formerly in popular use, especially for flavouring sauces, but it has fallen into disuse in this country as a culinary herb, though in France, the leaves and young shoots are still much used for seasoning, and it is regularly grown amongst kitchen herbs for the purpose. But there, in this country and America, it has an old reputation for its value as a medicinal tea. Catmint tea, infused from the dried herb, is stimulating, useful in colds and a valuable drink in cases of fever, because of its action in including sleep and producing perspiration without increasing the heat of the system. It is good in restlessness, colic and nervousness,

and is used as a mild nervine for children, one of its chief uses being in the treatment of children's ailments.

The flowering tops are the part utilised in medicine, and are harvested when the plant is in full bloom in August, and dried.

The most important use of the plant, however, is as a bee forage, for which purpose waste places are often planted with it.

CHERVIL.—*Scandix Cerefolium* (Linn.).

Chervil, a member of the order **Umbelliferae**, is a native of southern Europe and the Levant, but is commonly grown in English kitchen gardens.

Description. It has stems about 18 ins. tall, bearing a few bright green leaves, composed of oval, much cut into leaflets. The small white flowers, borne in umbels, are followed by long, pointed, black fruits, with a conspicuous furrow from end to end.

Cultivation. The culture is a very simple matter. The seeds, which retain their germinating power about three years, may be sown in any ordinary garden soil in a sunny part of the garden, nearly all the year round. The leaves are ready to gather in six to eight weeks from the time of sowing. A winter supply may be obtained by sowing the seed in shallow boxes in a frame or cool greenhouse. Sow where the plants are to grow, as a rule, and do not transplant, merely thinning out, when sufficiently advanced, to 9 ins. apart. Gather the leaves when 3 or 4 ins. high, and cut off close to the root, when they will shoot up again.

Small and frequent sowings are made at any time between the end of February and October, but a shadier position must be chosen in hot weather, and watering is necessary during the summer.

Uses. The tender leaves, which are highly aromatic, are used both in this country and in France for seasoning, and in mixed salads, also in soups. Chervil is rarely used alone, but is the chief ingredient in what the French call **finer herbes**, the mixture which enters into many culinary preparations.

The best variety is the Curled, which, having the same flavour, is a prettier garnish than the ordinary Chervil, and is used in this manner like Parsley, but fades more quickly.

The **Sweet Cicely**, or Giant Sweet Chervil (*Myrrhis Odorata*) must not be confounded with the Common Chervil. It is a native of Great Britain, found in mountainous pastures in the North, and is a perennial, with a thick root (which used to be boiled and eaten with oil and vinegar) and very aromatic foliage, and was used in olden days as a salad herb. Gerarde writes of it: "It hath leaves of a very good and pleasant smell and taste like unto Chervil and something hairy, which has caused us to call it Sweet Chervil."

CHIVES.—*Allium Schoenoprasum* (Linn.).

In England, Chives are comparatively little known, being by no means considered indispensable denizens of the kitchen garden, though in Scotland they are found in many a cottage garden and in France, where the science of cookery is more regarded than with us, they are very commonly used.

The Chive is the smallest, though one of the finest-flavoured of the Onion tribe, belonging to the botanical group of plants that goes under the name of *Allium*, which includes also the Garlic, Leek and Shallot, and is part of the great order **Liliaceae**.

Though said to be a native of Britain, it is only very rarely found here growing in an uncultivated state, and then only in the northern and western counties of England and Wales; where occasionally found wild in fields and meadows, it is generally only an outcast from the kitchen garden. But it grows in rocky pastures throughout temperate and northern Europe.

Description. The plant is a hardy perennial, that is to say produces each year fresh leaves from the same root, which is a tiny succulent bulb that lives through the winter under the surface of the ground after the leaves have died down in the autumn. The bulbs grow very close together in dense tufts or clusters, and are of an elongated form, with white, rather firm sheaths, the outer sheath sometimes grey.

The slender leaves appear early in spring and are long, cylindrical and hollow, tapering to a point and about the thickness of a crowsquill. They grow from 6 to 10 ins. high.

The flowering stem is usually nipped off with cultivated plants (which are grown solely for the sake of the leaves, or "grass"), but

when allowed to rise, it seldom reaches more than a few inches to at most a foot in height. It is hollow and either has no leaf at all on it, or has one leaf sheathing it below the middle. It supports a close globular head, or umbel, of purple flowers; the numerous flowers are densely packed together on separate, very slender little flower-stalks (botanically termed pedicels), shorter than the flowers themselves, which lengthen slightly as the fruit ripens, causing the heads to assume a conical instead of a round shape. The petals of the flowers are nearly half an inch long; when dry, their pale-purple colour, which has in parts a darker flush, changes to rose-colour. The anthers (the pollen-bearing part of the flower) are of a bluish-purple colour. The seed-vessel, or capsule, is a little larger than a hemp seed and is completely concealed within the petals, which are about twice its length. The small seeds which it contains are black when ripe and similar to Onion seeds.

The flowers are in blossom in June and July, and in the most cold and moist situations will mature their seeds, though rarely allowed to do so under cultivation.

Cultivation. The Thive will grow in any ordinary garden soil. It can be raised by seed, but is usually propagated by dividing the clumps in spring or autumn. In dividing the clumps, leave about six large bulbs together in a tiny clump, which will spread to a fine clump in the course of a year, and may then be divided. Set the clumps from 2 ins. to a foot apart each way. For a **quick return** propagation by division of the bulb clumps is always to be preferred.

The green from the clumps can be cut three or four times in the season. When required for use, each clump may be cut in turn, fairly close to the ground. The leaves will soon grow again and be found more tender each time of cutting. By carefully cropping, the "grass" can be obtained quite well in the season, until the early frosts come, when it withers up and thins out through the winter, pushing up again in the first warm days of February. For early crops, a little "grass" can be forced on the clumps by placing cutches or a "light" over them.

Beyond weeding between the clumps, no further care or attention is needed after division. Beds should be re-planted at least once in three or four years.

If it is desired to produce seed, grow two plantations, one for producing "grass" for use, and the other to be left to flower and

set seed, as you cannot get the two crops—"grass" and seed, off the one set of plants.

For market, the clumps are cut in squares and the whole plant sold. Treated thus, the greengrocers can keep them in good condition by watering until sold.

Uses. The Chive contains a pungent volatile oil, rich in sulphur, which is present in all the Onion tribe and causes their distinctive smell and taste, but is more delicate in this species.

It is most economical and delightful to use early in the year, especially before the spring onions come in, and also when onions are dear, makes an excellent and more delicate substitute for flavouring, for which purpose it deserves to be more widely grown.

It is a great improvement to salads—cut fresh and chopped fine—and may be put not only in green salads, but also into cucumber salad, or sprinkled on sliced tomatoes.

Chives are also excellent in savoury omelettes, and may be chopped and boiled with potatoes that are to be mashed, or chopped fresh and sprinkled, just before serving, on the top of a dish of mashed potatoes, both as a garnish and flavouring. They may also be put into soup, either dried, or freshly cut and finely chopped, and are a welcome improvement to home-made sausages, croquettes, etc., as well as being an excellent addition to beefsteak puddings and pies. A delicate *goût* is given to the dripping in which meat is fried, which is imparted to the meat itself, by adding some chopped Chives.

Finally, Chives are also useful for cutting up and mixing with the food of newly-hatched turkeys.

CLARY.—*Salvia Sclaria* (Linn.).

The Common Clary, a member of the order **Labiatae**, is like its near relative the Garden Sage, not a native of Great Britain, having first been introduced into English cultivation in the year 1562.

It is a native of Syria, Italy, southern France and Switzerland, but will thrive here upon almost any soil that is not too wet, though it will rot frequently upon moist ground in the winter.

The English name Clary originates in the Latin specific name *sclarea*, a word derived from *clarus*, clear. This name Clary was often

popularly modified into "Clear Eye," from the fact that the seeds have been employed for clearing the sight, being so mucilaginous, that a decoction from them placed in the eye, would "clear" it from any small foreign body, the presence of which might have caused irritation and by acting as an emulsion would remove the same by lubricating it away. Sometimes we find the plant not only called "Clear Eye" on this account, but also "See Bright" and even "Eye-bright," though this name rightly belongs to another plant—*Euphrasia officinalis*.

Clary is a biennial plant, its square, brownish stems growing 2—3 feet high, hairy and with few branches. The leaves are arranged in pairs, almost stalkless and are large, almost as large as the hand, oblong and heartshaped, wrinkled, irregularly toothed at the margins and covered with velvety hairs. The flowers are in a long, loose, terminal spike, on which they are set in whorls. The lipped corollas, similar to the Garden Sage, but smaller, are of a pale blue or white. The flowers are interspersed with large coloured, membranous bracts, longer than the spiny calyx. Both corollas and bracts are generally variegated with pale purple and yellowish-white. The seeds are blackish brown, "contained in long, toothed husks," as an old writer describes the calyx, and retain their germinating power for three years. The whole plant possesses a very strong, aromatic scent, somewhat resembling that of Fohn, while the taste is also aromatic, warm and slightly bitter.

Cultivation. Clary is propagated by seed, which should be sown in spring. When fit to move, the seedlings should be transplanted to an open spot of ground, a foot apart each way, if required in large quantities. After the plants have taken root, they will require no further care but to keep them free of weeds. The winter and spring following, the leaves will be in perfection. As the plant is a biennial only, dying off in the second summer, after it has ripened seeds, there shall be young plants annually raised for use.

In August, the leaves may be gathered, and if this harvest is judiciously done, the production of foliage should continue until midsummer of the second year, when the plant will probably flower and die off, being only a biennial, so that it will be necessary to rely upon new plants for supplies of leaves.

Young plants should therefore be raised annually for use.

Uses. According to Etmueller, this herb was first brought

into use by the wine merchants of Germany, who employed it as an adulterant, infusing it with Elder flowers and then adding the liquid to the Rhenish wine, which converted it into the likeness of Muscatel. It is still called in Germany *Muskateller Salbei* (Muscatel Sage).

The leaves can be used for flavouring, either fresh or dried, in the same manner as the Garden Sage, but the plant has almost fallen into disuse as a culinary herb.

Though employed in ancient times and in the Middle Ages for its curative properties, being mostly employed in disordered states of the digestion, it is now little esteemed also in this respect. However, of late there is a big trade being done with it, mainly in France, for the extraction of its oil as a perfume fixer, and there is undoubtedly a big future ahead for it for this purpose, not only on the Continent but also in this country. The oil has a highly aromatic odour, resembling that of ambergris, and is known commercially as Clary Oil or Muscatel Sage Oil.

CORIANDER.—*Coriandrum Sativum* (Linn.).

Coriander, an umbelliferous plant indigenous to southern Europe, is found occasionally in Britain in fields and waste places, and by the sides of rivers, but is rare and scarcely even naturalised, though frequently found in a semi-wild state in the East of England, having escaped from cultivation.

Coriander was originally introduced from the East, being one of the herbs brought to Britain by the Romans. As an aromatic stimulant and spice, it has been cultivated and used from very ancient times. It was employed by Hippocrates and other Greek physicians, and in the Book of Numbers, xi. 7, we read that Moses compares Manna to a Coriander seed.

The name *Coriandrum*, used by Pliny, is derived from *koros*, a bug, in reference to the foetid smell of the leaves.

Description. It is an annual, with erect stems, 1-3 feet high, slender and branched. The lowest leaves are stalked and pinnate, the leaflets roundish or oval, slightly lobed. The segments of the uppermost leaves are linear and more divided. The flowers are in shortly-stalked umbels, 5-10 rays, pale mauve, almost white, delicately pretty. The seed clusters are very symmetrical and the

seeds fall as soon as ripe. The plant is bright green, shining, glabrous and intensely foetid.

The seeds are quite round, like tiny balls, deeply furrowed, and about the size of a Sweet Pea Seed. They retain their vitality for five or six years. On drying they lose their disagreeable scent and become fragrant—the longer they are kept the more fragrant they become, with a warm, pungent taste.

Gerarde describes it as follows: "The common kind of Coriander is a very striking herb, it has a round stalk full of branches, two feet long. The leaves are almost like the leaves of the parsley, but later on become more jagged, almost like the leaves of Fumitorea, but a great deal smaller and tenderer. The flowers are white and grow in round tassels like Dill."

Cultivation. Coriander likes a warm, dry soil, though it does well in the somewhat heavy soil of Essex. On favourable land, the yield may reach or even exceed 1,500 lbs. to the acre.

Sow in mild, dry weather in April, in shallow drills about $\frac{1}{2}$ in. deep and 10 or 12 ins. apart, and cover in evenly with the soil. The seeds are slow in germinating. They may also be sown in March, in heat, for planting out in May. Except for keeping down the weeds, no further attention is necessary. The plants mature in about two months. As the seeds ripen, about August, the disagreeable odour gives place to a pleasant aroma, and the plants are then cut down with sickles, dried in the shade, and the fruit threshed out (see p. 100). The seeds can quickly be dried on trays in the sun, or by slight artificial heat.

Uses. In the northern countries of Europe, the seeds are sometimes mixed with bread, but the chief consumption of Coriander seed in this country is in flavoured certain alcoholic liquors, for which purpose it is largely grown in Essex. Distillers of gin make use of it.

It is also much used in making little round pink or white comfits for children, and other confectionery; and, especially in the East, as an ingredient in curry powder and other condiments.

The fruit is the only part of the plant that seems to have any medical or dietetical reputation. Although one of the British-grown plants included in the British Pharmacopoeia, it is now seldom em-

ployed in medicine except to disguise the taste of disagreeable drugs, though veterinary surgeons employ it as a drug for cattle and horses.

The inhabitants of Peru are so fond of the taste and smell of this herb that it enters into almost all their dishes in such quantities as to render the odour insupportable, and the taste is objectionable to any but a native. Both in Peru and in Egypt, the leaves are put into soup.

CUMIN.—*Cuminum cyminum* (Linn.).

Cumin, which besides being used medicinally, was in the Middle Ages one of the commonest spices of European growth, is a small annual, herbaceous plant, indigenous to Upper Egypt, but from early times cultivated in Arabia, India, China, and in the countries bordering on the Mediterranean.

Cumin is mentioned in Isaiah xxviii., 25 and 27, and Matthew xxiii., 23, and in the works of Hippocrates and Dioscorides. From Pliny we learn that the ancients took the ground seed medicinally with bread, water or wine, and that it was accounted the best of condiments.

In the 13th and 14th centuries, when it was much in use as a culinary spice, its average price in England per lb. was 2d., equivalent to 1/4 at the present day.

Description. Its stem is slender and branched, rarely exceeding one foot in height and somewhat angular. The leaves are divided into long, narrow segments like Fennel, but much smaller and are of a deep green colour, generally turned back at the ends. The upper leaves are nearly stalkless, but the lower ones have longer leaf-stalks. The flowers are small, rose-coloured or white, in stalked umbels with only 4-6 rays, each of which are only about one-third inch long, and bloom in June and July, being succeeded by fruit—the so-called seeds—which constitute the Cumin of pharmacy. They are oblong in shape, thicker in the middle, compressed laterally about one-fifth inch long, resembling Caraway seeds, but lighter in colour and bristly instead of smooth and almost straight, instead of being curved. They have nine fine ridges, overlapping as many oil channels, or *vittæ*. The odour and taste are somewhat like caraway, but less agreeable.

After the seed has been kept for two years it begins to lose its germinating power.

The strong, aromatic smell and warm, bitterish taste of Cumin fruits are due to the presence of a volatile oil, which is separated by distillation of the fruit with water.

Cultivation. Although we get nearly all our supplies from the Mediterranean, it would be perfectly feasible to grow Cumin in England, as it will ripen its fruit as far north as Norway. It is, however, rarely cultivated here, and seeds are generally somewhat difficult to obtain.

They should be sown in small pots, filled with light soil and plunged into a very moderate hot bed to bring up the plants. These should be hardened gradually in an open frame and transplanted into a warm border of good soil, preserving the balls of earth which adhere to the roots in the pots. Keep clean of weeds and the plants will flower very well and will probably perfect their seeds if the season should be warm and favourable.

The plants are threshed when the fruit is ripe and the "seeds" dried in the same manner as Caraway.

Uses. Cumin has now gone out of use in European medicine, having been replaced by Caraway seed, which has a more agreeable flavour, but it is still used to some extent in India, in native medicine. Its principal employment now is in veterinary medicine and as an ingredient in curry powder, for which purposes it is imported from Bombay and Calcutta, Morocco, Sicily and Malta. It is commonly sold in Malta where they call it *cumino agro*, hot cumin, to distinguish it from Anise, which they term *cumino dulce*, or sweet cumin.

In France, the seeds are used for flavouring pickles, pastry and soup.

DILL. *Anethum graveolens* (Linn.).

Dill is a hardy annual, a native of the Mediterranean region and southern Russia. It grows wild among the corn in Spain and Portugal and upon the coast of Italy, but rarely occurs as a corn-field weed in northern Europe. In olden times it was grown in

Palestine, and was well-known in Pliny's time, and often mentioned by writers in the Middle Ages.

Description. The plant grows ordinarily from 2-2½ ft. high, and is very like Fennel, though smaller, having the same feathery leaves, though seldom more than one stalk, and, unlike Fennel, its root is only annual. It is of very upright growth, its stems smooth, shiny and hollow, and in midsummer bearing umbels with numerous yellow flowers, whose small petals are rolled inwards. The flat fruits, the so-called "seeds"—are produced in great quantities. They are very pungent and bitter in taste, and very light, an ounce containing over 25,000 seeds, Their germinating capacity lasts for three years.

Cultivation. This annual is of very easy culture. When grown on a large scale for the sake of its fruits, it may be sown in drills 10 ins. apart, in March or April, 10 lbs. of the seed being drilled to the acre, and thinned out to leave 8-10 ins. room each way. Sometimes the seed is sown in autumn as soon as ripe, but it is not so advisable as spring sowing. Careful attention must be given to the destruction of weeds. Mowing is begun as the lower seeds begin to fall, the others ripening on the straw. In dry periods, cutting is best done in early morning, or late evening, care being taken to handle with the least possible shaking to prevent loss. The loose sheaves are built into stacks of about 20 sheaves, tied together. In hot weather, threshing may be done in the field, spreading the sheaves on a large canvas sheet and beating out. The crop is considered somewhat exhaustive of soil fertility. The average yield is about 7 cwt. of Dill fruits per acre.

The seeds are finally dried by spreading out on trays in the sun, or for a short time over the moderate heat of a stove, shaking occasionally.

Uses. The taste of the seeds is an odd blend of different species, resembling Caraway, but distinct. The seeds are smaller, flatter and lighter than Caraway, and have a pleasant aromatic odour, and contain about 3-4 per cent. of a volatile oil, obtained by distillation, upon which the action of the fruit depends.

As a sweet herb, Dill is not much used in this country. When employed, it is for flavouring soups, sauces, &c., for which purpose the young leaves only are required. The leaves added to

fish, or mixed with pickled cucumbers are said to give them a spicy taste.

Dill vinegar, however, forms a popular household condiment. It is made by soaking the seeds in good vinegar for a few days before using.

The French use Dill seeds for flavouring preserves, cakes and pastry, as well as for flavouring sauces, but their use of them does not appeal to us in this country.

Perhaps the chief culinary use of Dill seeds is in pickling cucumbers: they are employed in this way chiefly in Germany, where pickled cucumbers are largely eaten.

Like the other umbelliferous fruits and volatile oils both Dill fruit and Oil of Dill possess stimulant, aromatic, carminative and stomachic properties. Dill Oil is almost identical in composition with Caraway Oil. It is used in mixtures and as Dill water, which is a common domestic remedy for the flatulence of infants, and is a useful vehicle for children's medicine generally. It is also used for perfuming soaps.

As a drug, Dill fruits have been in use from very early times. The British Pharmacopœia directs that only the fruits from English-grown plants shall be employed pharmaceutically, and it is grown in East Anglia for that purpose. It is also largely cultivated in Germany.

Indian Dill, another species, not employed medicinally in Europe, is widely grown in the East Indies, under the name of *Sovah*, its fruit and leaves being used for flavouring pickles.

and DULCE.

Fennel, a hardy perennial, umbelliferous herb, with yellow flowers and feathery leaves, grows wild in most parts of temperate Europe, apparently indigenous to the shores of the Mediterranean, eastwards, but is largely cultivated for medicinal use in the south of France, Saxony, Gambia and Russia, as well as in India and Persia. It is now naturalised in some parts of this country, especially in Devon and Cornwall and on chalk cliffs near the sea.

The plant was cultivated by the ancient Romans for its aromatic fruits and succulent, edible shoots. Its culture was ordered

by Charlemagne upon the imperial farms, and it is frequently mentioned in Anglo-Saxon cookery prior to the Norman conquest. At the present day, it is most popular in Italy and France.

The whole plant has a warm, carminative taste and was highly esteemed by the ancient Greeks, who had a theory that serpents had recourse to it to cure blindness. It was also supposed to confer longevity, strength and courage, and Longfellow has written a poem about it to this effect. William Coles, in "Nature's Paradise," 1650, said that "both the seeds, leaves and roots of our Garden Fennel are much used in drinks and broths for those that are grown fat, to abate their unwieldiness and cause them to grow more gaunt and lank."

Description. Its stout stems, 4 to 5 ft. high, erect and cylindrical, bright green and so smooth as to seem polished, are much branched. The bright golden flowers are produced in July and August.

Fennel is naturally a very ornamental graceful plant, but in the kitchen garden, the stems are generally cut down to secure a constant crop of green leaves for flavouring and garnishing, so that the plant is seldom seen in the same perfection as in the wild state. In the original wild condition, it is variable as to size, habit, shape and colour of the leaf, number of rays in the flower-head or umbel, and shape of fruit, but it has been under cultivation for so long that there are now several well-marked species. The Common Garden Fennel (*F. capillaceum* or *officinale*) is distinguished from its wild relative (*F. vulgare*) by having much stouter, taller, tubular and larger stems, and less divided leaves, but the chief distinction is that the leaf stalks form a curved sheath around the stem, often even as far up the base of the leaf above. The flower stalks or pedicels of the umbels are also sturdier, and the seeds, $\frac{1}{4}$ to $\frac{1}{2}$ in. long, are double the size of the wild ones.

Cultivation. Fennel will thrive anywhere, and a plantation will last for years. It is easily propagated by seeds, sown early in April in ordinary soil. It likes plenty of sun and is adapted to dry and sunny situations, not needing heavily manured ground, though it will probably yield more on rich soil, on the stiff side. From $4\frac{1}{2}$ to 5 lb. of seed are sown per acre, either in drills, 15 inches apart, lightly, just covered with soil, and the plants afterwards thinned to a similar distance, or thinly in a bed and transplanted

when large enough. The fruit is heavy, and a crop of 15 cwt. per acre would probably be obtained. Cutting should be done in the end of September, as the lower fruits begin to fall, the others ripening on the straw. In dry periods, cutting is best done in early morning or late evening. The loose sheaves are built into small stacks of about twenty sheaves tied together, and the fruits separated by threshing in the same manner as Dill.

They can be **dried** either on trays in the sun, or by gentle heat over a stove, shaking occasionally.

The cessation of the supply of Fennel fruits from the Continent during the war led to its being grown more extensively here, any crop produced being almost certain to sell well.

For medicinal use, the fruits of the cultivated plants, especially those grown in Saxony, are alone official, as they yield the most volatile oil. Fennel fruits occur in several commercial varieties, varying in colour, size and appearance. Saxon fruits are greenish or yellowish-brown in colour, oblong, smaller and straighter than the French or Sweet Fennel (*Foeniculum dulce*), which is the cultivated form of the Wild Fennel, *Foeniculum vulgare*, and is distinguished by its greater length, more oblong form and sweet taste; its anise-like odour is also stronger, but it yields only about 2 per cent. of oil. The chief commercial varieties, Saxon, Galician and Russian, all yield 4 to 5 per cent. of volatile oil, and these varieties are alone suitable for pharmaceutical use.

It is absolutely necessary to have the true medicinal seeds if you wish to supply the drug market.

For family use, $\frac{1}{2}$ oz. of seed will produce an ample supply of plants, and for several years, either from the established roots or by re-seeding. Unless seed is needed for household or sowing purposes, the flower stems should be cut as soon as they appear.

Uses. It was formerly the practice to boil fennel with all fish, and it was mainly cultivated in kitchen gardens for this purpose. Its leaves are served nowadays with salmon to correct the oily indigestibility thereof, and are also put into sauce, in the same way as parsley, to be eaten with boiled mackerel. The seeds are also used for flavouring, and a carminative oil is distilled from them, with a sweetish aromatic odour and flavour, which is employed in the making of cordials and liqueurs.

It is also used in perfumery and for scenting soaps. A pound of oil is the usual yield of 500 lbs. of the seed.

The chief medicinal use of Fennel fruit is one of the ingredients of the well-known Compound Liquorice Powder. Fennel water has properties similar to those of Anise and Dill water: mixed with sodium bicarbonate and syrup, these waters constitute the domestic "gripe water," used to correct the flatulence of infants. Volatile oil of Fennel has these properties in concentration.

Fennel is largely used for cattle condiments, as well as in human medical practice.

It is one of the plants which is said to be disliked by flies, and powdered Fennel has the effect of driving away flies from kennels and stables.

In Italy and France, the tender leaves are often used for garnishes and to add flavour to salads, and are also added, finely chopped, to sauces served with puddings.

The tender stems are employed in soups in Italy, though more frequently eaten raw as a salad. The famous "Cartucci," of Naples, consists of the peeled stems, cut when the plant is about to bloom, and served with a dressing of vinegar and pepper. In olden days, poor people used to eat Fennel to satisfy the cravings of hunger on fast days.

Finnichio, or **Florence Fennel** (*Foeniculum dulce*) is a native of Italy, a small annual, even when full-grown and producing seed rarely exceeding 2 ft. in height.

It is a very thick-set plant, the stem joints are very close together and their bases much swollen. The large, finely-cut leaves are borne on very broad, pale green, or almost whitish stalks, which overlap at their bases somewhat like celery, swelling at maturity to form a sort of head or irregular ball—often as big as a man's head and resembling a tuber.

Cultivation. The cultivation is much the same as for Common Fennel, though it requires richer soil, and owing to the dwarf nature of the plant the rows and the plants may be placed closer together, the seedlings only 6 to 8 ins. apart. They are very thirsty, and require watering frequently in dry weather. When the "tubers" swell and attain the size of an egg, draw the soil

slightly around it, half covering it; cutting may begin about 10 days later. The flower-heads should be removed as they appear.

Florence Fennel should be cooked in vegetarian or meat stock, and served with either a rich butter sauce or cream dressing. It suggests celery in flavour, but is sweeter, and very pleasantly fragrant. In ordinary times it can be bought of Italian green-grocers in London. In Italy it is one of the commonest and most popular of vegetables.

HOPEHOUND. — *Marrubium Vulgare* (Linn.).

White Horehound is a perennial herbaceous plant, found all over Europe and indigenous to Britain. Like many other plants of the Labiate tribe, it flourishes in waste places and by roadsides, particularly in the counties of Norfolk and Suffolk, where it is also cultivated in the corners of cottage gardens for making tea and candy for use in coughs and colds.

It was formerly widely esteemed in cookery as well as medicine, but its flavour is too strong and lasting to be appreciated as a seasoning in modern cookery—the generic name is, indeed, derived from the Hebrew *Marrub*, “a bitter juice,” and it is considered to have been one of the bitter herbs which the Jews were ordered to take for the Feast of Passover. Its medicinal properties were recognised in the days of the Romans.

Description. The plant is bushy, producing numerous annual, quadriangular and branching stems, a foot or more in height, on which the whitish flowers are borne in crowded, axillary, woolly whorls. The leaves are much wrinkled, opposite, petiolate, about one inch long, covered with white, felted hairs, which give them a woolly appearance, from which the common name Horehound (Hoarhound) is derived. They have a curious, musky smell, which is diminished by drying, and lost on keeping. Horehound flowers from June to September.

Cultivation. White Horehound is a hardy plant, easily grown, which flourishes best in a dry, poor soil. It can be propagated from seeds sown in spring, cuttings, or by dividing the roots, the most usual method. If raised from seed, the seedlings should be planted out in the spring, in rows, with a space of about nine inches or more between each plant. No further culture will be

needed than keeping clean from weeds. It does not blossom until it is two years old. Often the clumps may be divided, or layers or cuttings may be used for propagation. No protection need be given as the plants are hardy. It is much cultivated in southern France, and it might probably pay to cultivate it more in this country.

Uses. Horehound has long been noted for its efficacy in lung troubles and coughs. For ordinary cold, a simple infusion of Horehound (Horehound Tea) is generally sufficient in itself to secure its removal. The tea may be made by pouring boiling water on the fresh or dried leaves, one ounce of the latter to the pint, and sweetening this with honey. A wineglassful may be taken three or four times a day.

Candied Horehound is best made from the fresh plant by boiling it down until the juice is extracted, then adding sugar at the rate of 8 or 10 lbs. to one pint of the strong decoction. This is boiled till of a very thick consistency and poured into moulds, or small paper cases, previously well dusted with finely-powdered white sugar, or poured on dusted marble slabs, and cut into squares when cool.

Two or three teaspoonfuls of the expressed juice of the herb may also be given as a dose in severe colds.

The herb is also brewed and made into Horehound Ale, an appetising and healthful beverage, much drunk in Norfolk and other country districts.

Bees are very fond of Horehound nectar, and the honey they make from the flowers where they are abundant has a high reputation, and used to be almost as popular as Horehound candy, and was obtainable from Druggists, as it was supposed to be very good for the throat.

HYSSOP.—*Hyssopus Officinalis* (Linn.).

The Hyssop is a perennial evergreen undershrub, belonging to the order **Labiataë**, and is a native of the Mediterranean region.

It gets its name from the Greek. The **Hyssopos** of Dioscorides was named **Azob**, a holy herb, because used for cleaning sacred places. Hence it is alluded to in this sense scripturally :

"Purge me with Hyssop, and I shall be clean." But though well known in ancient times, this plant is probably not the Hyssop used to sprinkle blood by the Jewish priests, which is now considered to be a species of Marjoram (*Origanum marj.*), which smells of and apparently contains the modern antiseptic Thymol.

In ancient and mediæval times Hyssop was grown for its medicinal qualities, for ornament and for cookery. It is now chiefly cultivated only as an ornamental plant.

Description. Hyssop is a bushy herb, growing from 1 ft. to 1½ and sometimes 2 ft. high, with quadrangular stems, and narrow, entire leaves placed on them opposite to one another in pairs. The flowers are in small clusters, crowded in terminal, one-sided spikes. There are three varieties, known respectively by their blue, red and white flowers, which are in bloom from June to October, and are often employed as edging plants. Grown with Catmint it makes a lovely border, backed with Lavender and Rosemary. The leaves, stems and flowers possess a highly aromatic odour, and a hot, bitter flavour.

Cultivation. Hyssop may be propagated by seeds, sown in April, or by dividing the plants in spring and autumn, or by cuttings, made in spring and inserted in a shady situation. Plants raised from seeds or cuttings, should, when large enough, be planted out about 1 ft. apart each way, and kept watered till established. They succeed best in a warm aspect and in a light, rather dry soil. The plants require cutting in, occasionally, but do not need much further attention, being perfectly hardy.

Uses. Hyssop is cultivated for the medicinal use of its flower tops, which are steeped in water to make an infusion, employed as an expectorant. The healing virtues of the plant are due to a particular volatile oil.

In the case of a cough, Hyssop made into a Tea or Syrup, with honey or treacle, is found highly beneficial.

For medicinal use, the flower tops are cut in August.

Distillers extract a colourless oil from the leaves, which is used in perfumery and for flavouring liqueurs. It required for this purpose the shoots should be cut when the flowers first open. From 100 to 500 lbs. of the fresh plant yield 1 lb. of oil.

As a kitchen herb Hyssop has greatly gone out of use because it is too strongly flavoured. It was formerly employed in broths, and its tender leaves and shoots are still occasionally added to salads, more in the nature of a condiment, to supply a bitter taste.

LOVAGE.—*Levisticum Officinale* (Koch).

This umbelliferous plant is a perennial, a native of the Mediterranean. The large, dark green, shining, radical leaves are usually divided into two or three segments. The thick, hollow, erect stems divide towards the top to form opposite, whorled branches, which bear umbels of yellow flowers, followed by extremely aromatic, hollowed fruits, with three prominent ribs.

Cultivation. Propagation is by division of roots or by seeds. Rich moist soil is required. In late summer, when the seed ripens, it is sown, and the seedlings transplanted either in the autumn or as early in spring as possible to their permanent places. Root division is performed in early spring. The plants should last for several years if the ground is kept well cultivated.

Uses. Formerly Lovage was used for a great variety of purposes, but now it is restricted almost wholly to confectionery, the young stems being treated like those of Angelica.

The leaf-stalks and stem bases were formerly blanched like celery.

MARIGOLD.—*Calendula Officinalis* (Linn.).

The Common Marigold is familiar to everyone, with its pale-green leaves and golden and orange flowers. It is an annual herb of the natural order **Compositæ**, a native of southern Europe, but perfectly hardy in this country. Its Latin name, suggestive of its flowering habit, signifies "blooming through the mouths." It is a general favourite, especially in country gardens, easily grown and so free a bloomer that it continues in blossom from early summer until the first hard frosts arrive and kill the plants.

Cultivation. For the garden, the seed is usually started in a hotbed during March or April, and the plants pricked out in shallow boxes, 2 ins. apart, and hardened off in the usual way. When

the weather becomes settled, they are set a foot or 15 ins. apart in rather poor soil, preferably light and sandy, with sunny exposure. The seed may also be sown in the open, and the seedlings transplanted when about 2 ins. high. When once established, the plants will increase from year to year, if allowed to seed themselves; the seeds ripen in August and September, and if permitted to scatter, will furnish a supply of young plants in the spring.

Uses. The Marigold was well known to the old Herbalists as a garden flower, and for use in cookery and medicine. It has been cultivated time out of mind in the kitchen garden for the flowers, which are dried in order to be boiled in broth, an old notion being that they are comforters of the heart and spirits.

Gerarde writes: "Conserve made of the flowers and sugar, taken in the morning fasting, cureth the trembling of the harte, and is also given in the time of plague or pestilence. The yellow leaves of the flowers are dried and kept throughout Dutchland against winter to put into broths, physcally potions and for divers other purposes, in such quantity that in some Grocers or Spicesellers are to be found barrels filled with them and retailed by the penny or less, insomuch that no broths are well made without dried Marigold."

Only the common, deep orange flowered variety is of medicinal value. The ray florets are used and need quick drying in the shade, in a good current of warm air, spread out on sheets of paper, loosely, without touching each other, or they will become discoloured.

Calendula is much used by homeopaths. A lotion is made from the flowers that is useful for sprains and wounds, and an infusion of the flowers is employed in fevers and measles, as it greatly promotes perspiration and throws out any eruption.

An ointment is made of the green plant and the blossoms mixed with butter and charcoal. Tincture of Calendula is used for bruises to promote absorption of effused blood.

The leaves, eaten as a salad, have been considered useful in the scrofula of children, and the acrid qualities of the plant have caused it to be recommended as an extirpator of warts.

A yellow dye has also been extracted from the flower by boiling.

Marigold flowers have been used as a substitute for Saffron for colouring butter and cheese, and are also employed for colouring Pot Pourri.

It has been asserted that a Marigold flower, rubbed on the affected part is an admirable remedy for the pain and swelling caused by the sting of a wasp or bee.

**MARJORAM.—*Origanum Vulgare*, *Onites*, *Marjorana*.
and *Heracleoticum*.**

There are two species of Marjoram generally cultivated for culinary use, Por or Perennial Marjoram (*Origanum Onites*) of southern Europe, and Sweet or Knotted Marjoram (*Origanum Marjorana*) native to North Africa, which is also perennial in its native habitat, but because of its liability to be killed by frost when grown in our cooler climate, is treated as an annual and grown only from seed. Both are largely used for seasonings, and our British Marjoram (*Origanum vulgare*) is also aromatic and has likewise been used for culinary purposes, though it is more thoroughly used for medicinal purposes—in herbal medicine—for which the cultivated species are rarely employed in this country.

A third species is sometimes cultivated for culinary use, **Winter Marjoram** (*Origanum Heracleoticum*) a native of Greece, but hardy enough to thrive in England in a dry soil.

The generic name, **Origanum**, is derived from two Greek words, meaning delight of the mountain, some of the species being found commonly upon mountain sides. The perennial species, **O. Onites**, is the one longest associated with civilisation, mentioned by Pliny, and the great Herbalists of the Middle Ages and the 16th century. The Sweet Marjoram, **O. Marjorana**, is considered to be the species regarded in India as sacred to Vishnu and Siva.

Description. Pot Marjoram, **O. Onites**, is a hardy perennial, growing nearly 2 ft. high, in branched clumps, the stems woody and often purplish, bearing numerous short-stalked, oval leaves about an inch long, nearly entire, and hairy beneath, and terminal clusters of short spikes of little pale-lilac or purplish blossoms with reddish bracts, blooming from the end of June through August. The oval, brown seeds are very minute. There is a

variety with white flowers and light green stalks, and another with variegated leaves used for ornamental purposes.

Sweet or Knotted Marjoram, *O. Marjorana*, is much more erect and more bush-like, has smaller, narrower leaves, whiter flowers, green bracts, and larger seeds. It begins to flower in the end of June or early July, and obtains its name of "Knotted" Marjoram from the flowers being collected into round, close heads like knots.

Wild Marjoram, *O. Vulgare*, a perennial herb with creeping roots, sends up woody stems about a foot high, branched above, and frequently purple in colour: it grows freely in England, being particularly abundant in calcareous soils, as in the South Eastern counties. The leaves are broader, and the flower spikes looser and fuller than the cultivated varieties.

In all the species the whole plant has a strong, peculiar, fragrant, balsamic odour, and a warm, bitterish aromatic taste, both of which properties are preserved when the herb is dry.

Cultivation. All the Marjorams do best in a warm situation, and dry light soil.

Pot Marjoram when once established may readily be propagated by cuttings taken in early summer, inserted under a hand-glass, and later planted out with a space of one foot between the rows and nearly as much from plant to plant, as it likes plenty of room. It may also be increased by division of roots in April, or by offsets, slipping pieces off the plants with roots to them and planting with trowel or dibber, taking care to water well. In May, they grow quickly after the operation. It is also very easy to grow from seed. Sow moderately thin, in dry, mild weather in March, in shallow drills about $\frac{1}{2}$ in. deep and 8 or 9 ins. apart, covered in evenly with the soil. Transplant afterwards, when a few inches tall, to about a foot apart each way. The seeds are very slow in germinating. From the very start, the plants must be kept free from weeds and the soil loose and open. The plants will last for years.

Sweet or Knotted Marjoram, as already stated, is not really an annual, but is usually treated as such, as the plants will not stand the winter outside, so must be sown every year. Seeds may be sown for an early supply in March on a gentle hot-bed and again, in a warm position, in light soil, in the open ground during April. Plants do well if sown in April, though long in germinating. The

seed is small and should be sown either in drills, nine inches apart, or broadcast, on the surface, trodden, raked evenly and watered in dry weather. On account of the slowness of germination, care should be taken that the seedlings are not choked with weeds, which being of much quicker growth are likely to do so if not destroyed. They should be removed by the hand, until the plants are large enough to use the small hoe with safety. Seed may also be sown early in May. In common with other aromatic herbs, such as Fennel, Basil, Dill, &c., it is not subject to the attacks of birds, as many other seeds are. When about an inch high, thin out to six or eight inches apart each way. It begins to flower in the end of June, when the first cutting of the herb may be taken.

Winter Marjoram, *O. Heracleoticum*, is generally propagated by division of the roots in autumn.

When it is desired to dry the leaves for winter use, the stems should be cut just as the flowers begin to appear, and dried in the usual manner. If seed is wanted, cut the stems soon after the flowers fall, when the scales around the seeds look as if they were beginning to dry. Dry the cut stems on trays of some closely woven material to prevent loss of seed. When the stems are thoroughly dry they must be threshed and rubbed before being placed in sieves, first of coarse, then of fine mesh.

Uses. The Marjorams are some of the most familiar of our kitchen herbs, and are cultivated for the use of their aromatic leaves, either in a green or dried state, for flavouring and other culinary purposes, being mainly put into stuffings. Sweet Marjoram leaves are also excellent in salads.

The "swete margerome" was so much prized before the introduction of various foreign perfumes that, as Parkinson tells us, "swete bags," "swete powders" and "swete washing water," made from this plant were widely used. Our forefathers also scoured their furniture with its aromatic juices, and it is one of the herbs mentioned by Tusser (1577) as used for strewing chambers.

The flowering tops yield a dye, formerly used in the country to dye woollen cloth purple, and linen a reddish-brown, but the tint is neither brilliant nor durable. The tops are also sometimes put into table beer, to give it an aromatic flavour and make it keep, and before the introduction of hops, they were nearly as much in demand for ale brewing as the ground ivy or wood sage. It is said that

Marjoram or Wild Thyme, laid by milk in a dairy will prevent it being turned by thunder.

Marjoram has a very ancient medical reputation. The Greeks used it extensively, both internally and for making fomentations. It was esteemed as a remedy for narcotic, poisons, convulsions and dropsy by them, and also by the older herbalists of Europe.

It was once greatly popular for herb tea, drunk in cases of headache and asthma, and large quantities of it are still gathered and hung up to dry in cottages in Kent and other counties for making Marjoram tea.

The plant yields by distillation with water a small quantity of a volatile oil, which may be seen in vesicles, on holding up the leaves between the eyes and the light, and which is the chief source of its properties as a medicinal agent. It is a thin light yellow or greenish liquid, with the concentrated odour of Marjoram and Peppermint, and has a warm and slightly bitter taste. One pound of the oil is produced from about 100 lbs. of the herb, which should be gathered for this purpose when just coming into flower early in July.

In France, Marjoram is cultivated commercially for the oil. Some distillation is also done in England from the Wild Marjoram. Origanum Oils are largely imported from Trieste, Smyrna and Cyprus. The medicinal qualities of the oil extracted from Sweet Marjoram, *Oleum Marjoranæ*, are similar to that of the Wild Marjoram, 15 ozs of the oil being yielded by 150 lbs of the fresh herb.

Oil of Marjoram is used also for perfuming toilet articles, especially soap.

SPEARMINT.—*Mentha Viridis* (Linn.).

There are three chief species of Mint in general use: Spearmint, *Mentha Viridis*; Peppermint, *Mentha Piperita*; and Pennyroyal, *Mentha Pulegium*, the first being the one ordinarily used for cooking, and the others being valuable medicinal herbs, whose virtues we need not consider here. Spearmint has also its place in the British Pharmacopœia as a medicinal plant, but it is with its familiar culinary uses that we are now concerned.

This common Garden Mint, also known as Mackerel Mint and Lamb Mint, is not a native of these Islands, though growing so freely in every garden, but is originally a native of the Mediterranean region, and was introduced into Britain by the Romans, being largely cultivated by them and by other Mediterranean nations. It was in great request by the Romans, and Pliny mentions that they made a practice of using it in their cookery. Gerarde renders what he says of it as : "The smell of mint docs stir up the minde and the taste to a greedy desire of meate." Ovid represents the hospitable Baucis and Philemon as scouring their board with green mint before laying upon it the food intended for their divine guests. The ancients had a notion that mint would prevent the coagulation of milk and its acid fermentation. Gerarde, quoting Pliny, says : "It will not suffer milk to cruddle in the stomach, and therefore it is put in milk that is drunke." Pliny also recommends a Crown of Mint to be worn when studying, as it "exhilarates the mind and is therefore proper for students."

Many other references are made to it in old writings, among them that of the payment by the Pharisees of tithes of Mint, Anise and Cumin, prove that the herb has been highly esteemed for many centuries.

Its generic name, **Mentha**, is derived from the mythological origin ascribed to it. Minthe (we learn from Ovid) was a nymph, who because of the love Pluto bore her, was from motives of jealousy metamorphosed by Proserpine into the plant we now call Mint.

Description. From creeping rootstocks, erect, square stems rise to a height of about 2 ft., having very short stalked acute-pointed, lance-shaped, wrinkled, bright green leaves with finely toothed edges, and smooth surfaces. The small flowers are densely arranged in cylindrical, slender, tapering spikes, are pinkish or lilac in colour, have two-lipped corollas, and are followed by very few roundish, minute, brown seeds.

Cultivation. A moist situation is preferable, but mint will succeed in almost any soil, when once started into growth, and does best in a partially shaded position. If in a sheltered spot, it will start earlier in the spring than if exposed. Where a long or regular supply is required, it is a good plan to have at least one bed in a sunny and sheltered, and another in a shady position, when gatherings may be made both early and late.

As the plant is a perennial, spreading by means of its underground, creeping stems, propagation may easily be effected by lifting the roots in February or March, dividing them—every piece showing a joint will grow—and planting again in shallow trenches, covering with 2 ins. of soil, 6 ft. apart in rows and 8 ins. between the rows are the right distances to allow.

Cuttings in summer or offsets in spring may also be utilised for increasing stock. Cuttings may be taken at almost any time during the summer, always choosing the young shoots, these being struck on a shady border of light soil and kept moist; or a better plan, if possible, is to insert them in a frame, keeping them close and moist till rooted. Cuttings or young shoots will also strike freely in good size boxes in a heated greenhouse in the early spring, and after the tops have been taken off two or three times for use, the plants may be hardened off and planted outside.

The beds are much benefitted by an annual top dressing of rich soil, applied towards the close of autumn, when all remaining stalks should be cut down to the ground. A liberal top dressing of short, decayed manure, such as that from an old hot-bed or mushroom bed, annually, either in the spring when it commences to grow, or better still, perhaps, after the first or second cutting, will ensure luxuriant growth. Frequent cuttings of shoots constitute a great drain on the plants, and if not properly nourished they will fail, more or less. To have really good Mint, the plantation should be re-made about every three years.

When the plants are about to bloom, the stalks should be cut on a dry day and dried for culinary use in the winter, being suspended in bunches to dry, in the usual manner.

If the herb is to be distilled for the sake of its volatile oil, it should be taken to the distillery as soon as possible after picking.

A good stock should be kept up, so that plenty may be available for forcing. For culinary purposes green leaves are always preferable to dry ones, and forcing is very easy, the only preparation being the insertion of a quantity of good roots in a box of light soil, which should be placed in a temperature of about 60° and watered freely as soon as growth starts. Cuttings may be made in two or three weeks. Forcing will generally be necessary from November to May—a succession being kept up by the introduction at intervals of an additional supply of roots. Often Mint is so

grown both upon and under the benches in greenhouses, and the demand for the young tender stems and leaves during the winter is sufficient to make the plants pay well.

Mint Disease. Unfortunately, Mint is susceptible to a disease which in some gardens has completely destroyed it. This disease, which from its characteristic symptoms is known as Rust, is incurable. The fungus which causes it develops inside the plant, and therefore cannot be reached by any purgicide, and as it is perennial, living in the underground stems when the shoots are dead, it cannot be got rid of by cutting off the latter. All that can be done is to prevent the spread of the disease by digging up all plants that show any sign of rust. The same ground should not be used again for Mint for several years. Healthy stock should be obtained and planted in uninfected soil some distance away. On account of this liability of Mint to rust, it is advisable not to have it all in one bed.

There are several forms of Garden Mint, the true variety being of bolt, upright growth, with fairly large and broad leaves, pointed and sharply serrated at the edges, and of a rich, bright green colour. Another variety is much smaller and less erect in growth, with darker leaves, but it possesses the same odour and flavour; and another has comparatively large, broad or rounded leaves, clothed with soft hairs, but this, though distinct from what is known as "horse mint," is inferior to the true "spear" variety. A form with its leaves slightly crisped is common in gardens under the name of **Mentha Crispa**.

Mint has been estimated to yield from 4 to 5 tons per acre, from which 15 to 20 cwt. of dry should be obtained. Average yields per acre are, however, taken when crops are at maturity, and an estimate of the first cutting crop is hard to form, and is likely to be less profitable than succeeding years on account of initial expenses.

Uses. Mint is chiefly used for culinary purposes, and to a lesser degree in medicine when something not so strong as Peppermint is needed, the oil distilled from the plant, Oil of Spearmint, being used and being better adapted than Peppermint in children's maladies. It is added to many compounds on account of its carminative properties and pleasant taste.

When eaten with lamb in the form of Mint Sauce, it greatly aids the digestion, as it makes the crude, albuminous fibres of the

immature meat more digestible. The oil stimulates the digestive system, and prevents septic changes within the intestines.

Mint Jelly can be used instead of Mint Sauce, in the same manner as Red Currant Jelly is eaten with Mutton and Hare. It may be made by steeping the Mint leaves in apple jelly, or in one of the various kinds of commercial gelatine. The jelly should be a delicate shade of green. A handful of leaves should colour and flavour about $\frac{1}{2}$ pint of jelly. Strain the liquid through a jelly bag to remove all particles of Mint before allowing to set.

The fresh sprigs of Mint are used to flavour green peas and also new potatoes, being boiled with them, and the powdered, dried leaves are used with pea soup and also in seasonings.

In the 14th century, Mint, we find, was used for whitening the teeth, and its distilled oil is still used to flavour toothpastes, etc., and in America, especially, to flavour chewing gums.

It has been said that mice are so averse to the smell of Mint, either fresh or dried, that they will leave untouched any food where it is scattered, and not go near a larder if it is present.

PARSLEY. *Garum Petroselinum* (Linn.).

The Garden Parsley, a member of the order *Umbelliferæ*, is not indigenous to Britain: Linnæus stated its wild habitat to be Sardinia, whence it was brought to England and apparently first cultivated here in 1548. Bentham and De Candolle considered it a native of the Eastern Mediterranean regions.

Petroselinum, the specific name of the Parsley, from which our English name is derived, is of classic origin, and is said to have been assigned to it by Dioscorides. It is derived from the habitat of the plant, which naturally grows among rocks, the Greek word for which is *Petros*.

This name in the Middle Ages became corrupted into *Petroselinum*—this was anglicised into Petersylinge, Persele, Persely and finally Parsley.

Many of the ancient writings contain references to it, and some give directions for its cultivation.

The Greeks held Parsley in high esteem, crowning the victors with chaplets of Parsley at the Isthmian games, and making with it wreaths for adorning the tombs of their dead. The herb was never brought to table of old, being held sacred to oblivion and to the dead. It was reputed to have sprung from the blood of a Greek hero, Archemorus, the fore-runner of death, and Homer relates that chariot horses were fed by warriors with the leaves. Greek gardens were oftened bordered with Parsley and Rue. It is undoubtedly the most widely grown of all garden herbs.

Several cultivated varieties exist, the principal being the common plain-leaved, the curled-leaved, the Hamburg or broad-leaved and the celery-leaved. Of the variety *crispum*, or curled-leaved, there are no less than 37 variations; the most valuable are those of a compact habit and with close, perfectly curled leaves. The common sort bears close leaves, but is of a somewhat hardier nature than those of which the leaves are curled; the latter are, however, superior in every way. The variety *crispum* was grown in very early days, being even mentioned by Pliny.

The Hamburg, or turnip-rooted Parsley is grown only for the sake of its enlarged fleshy tap-root. No mention appears to have been made by the ancients, or in the Middle Ages, of this variety, which Miller in his "Gardeners' Dictionary" (1771) calls "the large-rooted Parsley, and which under cultivation develops both a parsnip-like, as well as a turnip-shaped form." Miller says, "This is now pretty commonly sold in the London markets, the roots being six times as large as the common Parsley. This sort was many years cultivated in Holland before the English gardeners could be prevailed upon to sow it. I brought the seeds of it from thence in 1727; but they refused to accept it, so that I cultivated it several years before it was known in the markets." At the present day, the "long white" and the "round sugar" forms, are sold by seed-growers and are in esteem for flavouring soups, stews, &c., the long variety being also cooked and eaten like parsnips, in taste resembling celeriac or turnip-rooted celery.

Neapolitan, or celery-leaved parsley is grown for the use of its leaf-stalks, which are blanched and eaten like those of celery.

The plain-leaved parsley was the first known in this country, but it is not now much cultivated, the leaves being less attractive than those of the curled, of a less brilliant green and coarser in flavour. It also has too close a resemblance to Fool's Parsley,

Anthriscus cynapium, a noxious weed of a poisonous nature, infesting gardens and fields. The leaves of the latter, though similar, and by the unobservant, to be mistaken for the true Parsley, with unpleasant results, are, however, of a rather darker green and when bruised, emit an unpleasant odour, very different to that of Parsley. They are, also, more finely divided. When the two plants are in flower, they are easily distinguished, *Anthriscus* having three tiny, narrow, sharp-pointed leaflets hanging down under each little umbellule of the white umbel of flowers, whereas in the Garden Parsley, there is usually only one leaflet under the main umbel, the leaflets or bracts at the base of the small umbellules only being short and as fine as hairs. *Anthriscus* leaves, also, are glossy beneath. Gerard called *Anthriscus* "Dog's Parsley," and says the whole plant is of a naughty smell."

Like most biennials, Parsley develops only a rosette of leaves during the first year. During the second season, the erect, branched, grooved flower-stems are thrown up, a foot or more in height, bearing umbels of small greenish flowers. The fruits are light brown or gray, convex on one side and flat on the other, the convex side marked with fine ribs.

Cultivation. Parsley requires an ordinary, good well-worked soil, but a moist one and a partially-shaded position is best. A little manure may be added to the soil.

The seed may be sown in drills, or broadcast, or, if only to be used for culinary purposes, as edging, or between dwarf or short-lived crops.

For a continuous supply, three sowings should be made: as early in February as the weather permits, in April or early in May, and in July and early August—the last being for the winter supply, in a sheltered position, with a southern exposure. Sow in February for the summer crop and for drying purposes. Seed sown then, however, takes several weeks to germinate, often as much as a full month, though germinating may be hastened by a few days soaking in tepid water.

The principal sowing is generally done in April: it then germinates more quickly and provides useful material for cutting throughout the summer. A mid-August sowing will furnish good plants for placing in cold frames for winter use.

An even broadcast sowing is preferable, if the ground is in

the condition to be trodden, which appears to fix the seed in its place, and after raking leaves a firm even surface.

The seed should be but slightly covered, not more than $\frac{1}{2}$ in. deep and thinly distributed ; if in drills, these should be 1 ft. apart.

It is not necessary, however (though usual), to sow the seed where the plants are to be grown, as when large enough, the seedlings can be pricked out into rows.

When the seedlings are well out of the ground—about an inch high—adequate thinning is imperative, as the plants dislike being cramped, and about 8 ins. from plant to plant must be allowed ; a well-grown plant will cover nearly a square foot of ground.

The rows should be liberally watered in dry weather ; a sheltered position is preferred to a very exposed or open one, as the plants are liable to become burnt up in very hot and dry summers. The rows should be kept clean of weeds by hoeing, and frequent dressings of soot may be applied with advantage.

If the growth becomes coarse in the summer, cut off all the outer leaves and water well. This will induce a new growth of fine leaves again, and may always be done when the plants have grown to a good size, as it encourages a stocky growth.

When thus cut at the end of the summer, the plants will keep growing slowly, and the leaves made at this season will last all the winter in districts that are in any way favourable.

Soon after the old or last year's plants begin to grow again in the spring, they run away to flower, but if the flower stems are promptly removed, and the plants top dressed and watered, they will remain productive for some time longer. Renew the beds every two years, as the plant dies down at the end of the second season.

When sowing Parsley to stand the winter, a plain-leaved variety will often be found superior to the curled or mossy sorts, which are, perhaps, handsomer, but the leaves retain both snow and rain, and when frost follows, the plants soon succumb. A plain-leaved Parsley is far hardier, and will survive even a severe winter and is equally good for cooking, though not so attractive for garnishing. Double the trouble is experienced in obtaining a supply of Parsley during the winter, when only the curled-leaved varieties are grown.

When curled Parsley is desired and is difficult to obtain, by there being no sufficiently sheltered spot in the garden for it, it may often be saved by placing a frame-light over the bed during severe weather to protect the plants, or they may be placed altogether in cold frames. Care must be taken with all parsley plants grown thus in frames, to pick off all decaying leaves directly noticed, and the soil should be stirred occasionally with a pointed stick between the plants, to prevent its becoming sour. Abundance of air should be given on all favourable occasions, removing the light altogether on fine days.

In field culture, if sown in drills 12-15 ins. apart, 6 or 7 lbs. of seed will be needed for the acre. For cultivation on a smaller scale, an ounce may be found sufficient for 50 to 100 ft. of drill, which quantity should be enough for an ordinary family.

The first cutting of leaves from field-sown seed should be ready by mid-summer. A succession of cuttings can be obtained. About three weeks are required for a new crop of leaves to grow and mature after the plants have been cut. Larger yields can be secured by cutting only the fully-matured leaves, allowing the others to remain and develop for later cuttings, it being possible to gather three or four times as much from a given area in this way.

As Parsley is grown for its leaves, it can scarcely be over-fertilised, and to obtain the best results plenty of nitrogenous food must be in the soil, which should be well supplied with humus, preferably that derived from decaying leguminous crops, or from stable manure: a good compound manure may also be applied.

If it is desired to save the seed, the heads are cut when the bulk of the seed is brown, or at least dark-coloured. The stalks must be cut carefully to avoid shaking the seed off. They are laid upon sheets of canvas and threshed very lightly, at once, to remove only the ripest seed. Then the stalks are spread thinly upon sheets in the sun for a couple of days, when they are threshed again, by which time, all the seed ripe enough to germinate will fall off. Spread both sets of seed thinly on sheets in an airy shed or loft, turning daily for 10 days or a fortnight, to make sure that they become perfectly dry, before storing in airtight receptacles.

Uses. The uses of Parsley are many and by no means restricted to the culinary sphere. The most familiar employment of the leaves in their fresh state is, of course, finely-chopped, as a

flavouring to sauces, soups, stuffings, rissoles, minces, etc., and also sprinkled over potatoes, whether mashed or whole, over vegetable marrow, or over salads, either potato salad or tomato salad. Sprigs of fresh parsley form the most favourite garnish to cold dishes, and it is also often fried whole as a garnish. The leaves are extensively cultivated, not only for sending to market fresh, but also for the purpose of being dried and powdered as a culinary flavouring in winter, when only a limited supply of the fresh parsley is obtainable. There is always a market for dried parsley—as much as 2/- per lb. being given by wholesale buyers for first-class dried parsley when demand is keen, though the usual price is 10d. to 1/- per lb.

In addition to the leaves, the **stems** are also dried and powdered, both as a culinary colouring and for dyeing purposes. There is a market for the seeds to supply nurserymen, etc., and the roots of the turnip-rooted variety, as above mentioned, are used as a vegetable and flavouring.

Medicinally, the two-year old **roots** are employed, also the **leaves**, dried, for making Parsley Tea, and the **seeds**, for the extraction of an oil called Apiol, which is of considerable curative value. The best kind of seed for medicinal purposes is that obtained from the Triple Moss curled variety. The wholesale drug trade generally obtains its seed from farmers on the East coast, each sample being tested separately before purchases are made. It has been the practice to buy second year seeds which are practically useless for growing purposes: it would probably hardly pay farmers to grow for Apiol producing purposes only, as the demand is not sufficiently great.

Parsley is chiefly used for its diuretic properties, a strong decoction of the root being of great service in gravel, stone, congestion of the kidneys, dropsy and jaundice. Parsley Tea, infused from the dried leaves, is used for the same purpose. The bruised leaves, applied externally, have been used in the same manner as Violet leaves (also Celandine, Clover and Comfrey), to dispel tumours suspected to be of a cancerous nature. A poultice of the leaves is said to be an efficacious remedy for the bites and stings of poisonous insects.

Formerly the distilled water of parsley was often given to children troubled with wind, as Dill water still is.

Though the medicinal virtues of parsley are still fully recog-

nized, in former times it was considered a remedy for yet more disorders than at the present day. Its imagined quality of destroying poison, to which Gerarde refers, was probably attributed to the plant from its remarkable power of overcoming strong scents, even the odour of garlic being rendered almost imperceptible when mingled with that of Parsley.

The plant is said to be fatal to small birds and a deadly poison to parrots, and also very injurious to fowls, but hares and rabbits will come from a great distance to indulge their taste for Parsley, so that it is scarcely possible to preserve it in gardens to which they have access. Sheep are also fond of it, and it has been said to be a sovereign remedy to preserve them from footrot, provided it be given them in sufficient quantities, about twice a week, for two or three hours each time, being recommended, but its beneficial action on this disease is now-a-days not universally accepted.

The roots are collected for medicinal purposes in the second year, in autumn or late summer, when the plant has flowered. They are first cleaned well and then sliced longitudinally if very thick, to hasten the progress of drying, which may be done in the open, in the sun, or indoors by artificial heat, in a well-ventilated shed or room, care being taken that the hot air can escape at the top of the room. The roots must be dry to the core and brittle, snapping when bent.

The best time for collecting the leaves for medicinal use is just before the plants come into flower. They should be gathered in the morning, on a fine, dry day, after the dew has been dried off by the sun. If it is sufficiently warm, they may be dried out of doors, on wire sieves or netting trays, raised a few feet above the ground, in half-shade, care being taken to bring them in before there is any chance of becoming damp from dew. A sunny attic or loft may also be employed, the window being left open by day, so that there is a current of air and the room does not become steamy. The leaves can be placed on coarse butter-cloth, *stented*, i.e., if hooks are placed beneath the window and on the opposite wall; the butter-cloth can be attached by rings sewn on each side of it and hooked on, so that it is stretched quite taut. The best drying temperature for aromatic herbs is from 70° to 80°. If there be no sun to warm the room, it may be heated by a coke or anthracite stove, provided that there is good ventilation.

To dry parsley towards the close of the summer for culinary

use, it may be put into the oven on muslin trays, when cooking is finished, this being repeated several times till thoroughly dry and crisp, when the leaves should be rubbed in the hands or through a coarse wire sieve and the powder then stored in tins, so that neither air nor light can reach it, or the good colour will not be preserved. In the trade, there is a special method of drying which preserves the colour. Further particulars on the process of colour preservation can be obtained on application from the Author.

The oil is extracted from the "seeds" or rather fruits, when **fresh**, in which condition, not dried, they are supplied to the manufacturing druggists.

ROSEMARY.—*Rosmarinus Officinalis* (Linn.).

Rosemary, the well-known evergreen shrub, grown in small quantities in almost every garden, was introduced into England before the Norman Conquest. It came originally from the south of Europe, where it grows abundantly on the dry, rocky hills of the Mediterranean region.

The shrub takes its name from *ros*, dew and *marinus*, belonging to the sea, in allusion to the grey, glistening appearance of the plant and its natural locality near the sea, with somewhat of its odour.

The ancients are well acquainted with this shrub, which has always been supposed to strengthen the memory. On this account it became the emblem of fidelity in lovers. It holds quite a special position among the herbs from the symbolism attached to it, apart from any of its household or medicinal uses. Not only was it in olden days employed at weddings, but also at funerals, for decking churches and banqueting halls at festivals, as incense in religious ceremonies, and in spells against magic—in fact, it was always regarded with a species of affection perhaps given to no other plant.

"There's Rosemary for you, that's for remembrance! Pray you, love, remember," says Ophelia in *Hamlet*.

At weddings, it was entwined in the wreath worn by the bride, being first dipped into scented water. Anne of Cleves, we are told, wore such a wreath at her wedding. A Rosemary branch, richly gilded and tied with silken ribands of all colours, was also

presented to the wedding guests, as a symbol of love and loyalty. Together with an orange stuck with cloves it often served as a little New Year's gift—allusions to this custom are to be found in Ben Johnson's plays.

Sir Thomas More writes: "As for Rosmarine, I lett it runne all over my garden walls, not onlie because my bees love it, but because it is the herb sacred to remembrance, and, therefore, to friendship: whence a sprig of it hath a dumb language that maketh it the chosen emblem of our funeral wakes and in our buriall grounds."

In place of more costly incense, the ancients often employed Rosemary in their religious ceremonies. An old French name for it was *Incense*.

It was an old custom to burn Rosemary in sick chambers, because of its supposed preservative powers against pestilential disorders. In the French hospitals it is customary to burn Rosemary, together with Juniper berries, for purifying the air and preventing infection. Like Rue, it was placed in the dock of courts of justice, to guard those present from the contagion of gaol-fever that might have been brought in by the prisoner.

In early times, Rosemary was freely cultivated in kitchen gardens and came to represent the dominant influence of the housemistress. "Where Rosemary flourished the woman ruled." Sprigs of the shrub were formerly stuck into beef, whilst being roasted, as a relish and used as a seasoning for poultry.

It was cultivated by the Spaniards in the 13th century, and from the 15th to the 18th century was popular as a condiment with salt meats, but has since declined in popularity, until now it is used for seasoning almost exclusively in Italian, French, Spanish and German cookery.

Description. The plant is a half-hardy evergreen growing 2 ft. or more high, the erect, branching, woody stems bearing a profusion of little, narrow, blunt leaves, less than an inch long, with their margins turned back, their surfaces dark green above and hoary white beneath. The leaves have a pungently aromatic and somewhat camphoraceous odour. The flowers are arranged in leafy clusters in the upper parts of the stem, and are small and pale blue; much of the active volatile principle resides in their calyces, though all parts of the plant are fragrant.

There are varieties with silver and gold striped leaves, but the green-leaved variety is the kind used medicinally and for the extraction of the oil, obtained by distillation from its flowering tops: The blossoms contain much nectar, and the famous Narbonne honey is said to derive its flavour from Rosemary, which grows there in great profusion.

Cultivation. Rosemary is propagated by seeds, cuttings and layers, and also by division of roots. Seeds may be sown upon a warm, sunny border in February or March.

Cuttings, taken in August, six inches long, and dibbled into a shady border, two-thirds of their length in the ground, under a hand glass, will root and be ready for transplanting into permanent quarters the following autumn. Layering may be readily accomplished in summer by bringing some of the lower branches down and pegging them beneath a little sandy soil.

Rosemary succeeds best in a light, rather dry soil, and in a sheltered situation, such as the base of a low wall with a south aspect. On a chalk soil it grows smaller, but is more fragrant. The silver and gold-striped kinds are not quite so hardy.

The finest plants are said to be raised from seed.

Uses. The tender fresh leaves and stems and the flowers have been used for flavouring stews, fish and meat sauces. They may also be used in small quantities for summer cups, such as cider cup and claret cup, and a small pinch is also agreeable in salads.

In the south of France large quantities, both cultivated and wild, are used for distilling Oil of Rosemary, which is extensively used in perfumery, especially in the manufacture of Eau-de-Cologne, Hungary water and other perfumes. It is also employed in perfuming soaps, tobacco and sachet powder.

Spirit of Rosemary is largely used in hair-lotions, for its odour and effect in specially stimulating the hairbulbs to renewed activity and preventing premature baldness. An infusion of the dried plant (both leaves and flowers) combined with Borax and used when cold, makes one of the best hair-washes known. It forms an effectual remedy for the prevention of scurf and dandriff.

Rosemary is of long usage as a hair-wash, for we know that the ancients not only valued the plant as a means to refresh the

memory and comfort the brain, but we hear that they never considered their toilet complete without an infusion or spirit of Rosemary. It had also a reputation with them as a drug plant.

Rosemary Wine was of old always kept in the still-room, as it was considered, when taken in small quantities, to act as a quieting cordial to a weak heart subject to palpitation. It is made by chopping up sprigs of green Rosemary, pouring on them white wine, which is strained off after a few days and is then ready for use. By stimulating the brain and nervous system, it is a good remedy for headaches caused by a feeble circulation.

RUE. *Ruta Graveolens* (Linn.).

Rue, a hardy evergreen, somewhat shrubby plant, is a native of southern Europe. It is a member of the same botanical family as the orange, and unrelated to most of the other herbs with which we are dealing.

It had a high reputation for seasoning and as a medicine in the times of the Greeks and Romans—in Pliny's time it was considered to be curative in no less than 84 maladies.

The name *Ruta* is from the Greek *ruo*, to set free, because this herb is so efficacious in various diseases. It was much used by the ancients; Hippocrates specially commended it, and it constituted a chief ingredient of the famous antidote to poison used by Mithridates. In this country Rue is one of our oldest garden plants, cultivated for its use medicinally, having, together with other herbs, been introduced by the Romans, but it is not found in a wild state, except rarely on the hills of Lancashire and Yorkshire.

At one time the holy water was sprinkled from brushes made of Rue at the ceremony usually preceding the Sunday celebration of High Mass, for which reason it is supposed it was named the Herb of Repentance and the Herb of Grace. "There's rue for you and here's some for me; we may call it herb of grace o' Sundays," says Ophelia in *Hamlet*.

Rue has been regarded from the earliest times as most successful in warding off contagion and preventing the attacks of fleas and other noxious insects. It was the custom—lasting into the early part of last century—for Judges, sitting at Assizes, to have

sprigs of Rue placed on the bench of the dock, as defensive against the pestilential infection brought into court from gaol by the prisoner. The bouquet still presented in some districts to Judges at the Assizes was originally a bunch of aromatic herbs, given to him for the like purpose of warding off the gaol-fever, and Rue formed a portion of it.

Recent research has shown that the essential oil contained in Rue, as in other aromatic herbs like Elecampane, Rosemary and Cinnamon, serves by its germicidal principles to extinguish bacterial life.

Description. The stem is woody at the lower part and much branched, 18 ins. to 2 ft. high, bearing small, oblong, stalked leaves, bluish-green and shining, two or three times divided, the terminal leaflet broader and notched at the end. The rather large greenish-yellow flowers are in terminal panicles, and are in bloom from June to September. The whole plant has a very powerful, disagreeable odour, and an exceedingly bitter, acid and nauseous taste.

Cultivation. The plant grows almost anywhere, but thrives best in a partially sheltered and dry situation. Propagation may be effected: (1) by seeds, sown outside, broadcast, in spring, raked in and the beds kept free from weeds, the seedlings, when about 2 ins. high, being transplanted into fresh beds, allowing about 18 ins. each way, as the plants become busy; (2) by cuttings, taken in spring and inserted for a time, until well rooted, in a shady border; (3) by rooted slips, also taken in spring. Every slip or cutting of the young wood will readily grow, and this is the most expeditious way of raising a stock.

Rue will live much longer and is less liable to be injured by frost in winter when grown in a poor, dry, rubbishy soil than in good ground.

As the flowers are attractive, Rue is often planted in shrubberies for ornamental purposes. When so grown it is well to cut the stems close to the ground every two or three years.

Uses. Rue is no longer used as a seasoning, but it is still used to a limited extent by some who like bitter flavours, not only in culinary preparations but in beverages, its young leaves being occasionally put into claret cup. Italians use the leaves as a salad.

The whole plant is used in distilling a colourless oil, which is used in making aromatic vinegars and other toilet preparations. A pound of oil is obtained from 150 to 500 lbs. of the green plant.

The dried herb is used, powdered, to make a medicinal tea, useful in hysterical affections, and as a stomachic.

Country people use Rue leaves as a cure for croup in poultry, either boiling them in treacle, thus making a conserve of them, or chopping them fine, mixing them with butter, and administering them in the form of little pills. Rue has also been employed in the diseases of cattle.

A few sprigs of Rue hung in a room will keep flies from the apartment.

SAGE. *Salvia Officinalis* (Linn.).

The Common Sage, belonging to the order **Labiatae**, the familiar plant of the kitchen garden, an evergreen undershrub, though not a native of these islands, its natural habitat being the northern shores of the Mediterranean, has been cultivated for culinary and medicinal purposes for many centuries in England, France and Germany, being sufficiently hard to stand any ordinary winter outside. Gerarde mentions it as being in 1597 a well-known herb in English gardens and represented in his own garden in Holborn by several varieties.

Sage is found in its natural wild condition from Spain along the Mediterranean coast up to and including the east side of the Adriatic; it grows in profusion on the mountains and hills in Croatia and Dalmatia, being found mostly where there is a limestone formation with very little soil, but it seems to grow in all kinds of places, some of the barren hills in the region of Fiume having very little vegetation other than this wild Sage. When wild it is much like the common garden Sage, though more shrubby in appearance and has a more penetrating odour, being more bitterly spicy and astringent than the cultivated plant. The best kind, it is stated, grows on the islands of Veglia and Cherso near Fiume, where the surrounding district is known as the Sage region. The collection of Sage forms an important cottage industry in Dalmatia. During its blooming season, moreover, the bees gather the nectar and genuine Sage honey commands there the highest price, owing to its flavour.

The name of the genus, *Salvia*, is derived from the Latin, *Salvere*, to be saved, in reference to the curative properties of the plant, which was in olden times celebrated as a medicinal herb of great value. This name was corrupted popularly to *Sauja* and *Sauge* (the French form), in old English, "Sawge," which has become our present-day name of Sage.

Sage is now neglected by the regular medical practitioner, though still used in domestic medicine, as a homely remedy. It was otherwise among the ancients, among whom and throughout the Middle Ages, it was in high repute. A well-known monkish line about it run: *Cur moriatur homo cui Salvia crescit in horto?* ("Why should a man die whilst sage grows in his garden?") corresponding to an old English saying:

"He that would live for aye
Must eat Sage in May."

A translation of an old French saying runs:

"Sage helps the nerves and by its powerful might
Palsy is cured and fever put to flight."

and Gerarde, clearly believing this, says, "Sage is singularly good for the head and brain, it quickeneth the senses and memory, strengtheneth the sinews, restoreth health to those that have the palsy, and taketh away shakey trembling of the members." He says further, "No man need to doubt of the wholesomeness of *Sage Ale*, being brewed as it should be with Sage, Betony, Scabious, Spike-nard, Squinnette and Fennell Seed."

Sage generally grows about a foot or more high, with wiry stems. The leaves are set in pairs on the stem and are $1\frac{1}{2}$ -2 ins. long, stalked, oblong, rounded at the ends, finely wrinkled by a stringly-marked network of veins on both sides, greyish-green in colour, softly hairy and beneath glandular. The flowers are in whorls, purplish and the corollas lipped. They blossom in August. All parts of the plant have a strong, scented odour and a warm, bitter, somewhat astringent taste, due to the volatile oil contained in the tissues.

In cultivation, Sage is a very variable species, and in gardens may be found varieties with narrower leaves, crisped, red, or variegated leaves and smaller or white flowers. The form of the calyx teeth also varies and the tube of the corolla is sometimes much longer. The two usually absent upper stamens are sometimes

present in very small sterile hooks. The Red Sage and the Broad-leaved variety of the White (or Green) Sage—both of which are used and have been proved to be the best for medical purposes—and the narrow-leaved White Sage, which is best for *culinary* purposes as a seasoning, are classed merely as varieties of *Salvia officinalis*, not as separate species. There is a variety called the Spanish, or Lavender-leaved Sage, and another called the Worm-wood Sage, which is very frequent.

Cultivation. The Garden Sage succeeds best in a warm and rather dry border, but will grow well almost anywhere in ordinary garden soil; it thrives in a situation somewhat shaded from sunshine, but not strictly under trees.

It is a hardy plant, but though a perennial, does not last above three or four years without degenerating, so that the plantation should be renewed at least every four years. It is propagated occasionally by seed, but more frequently by cuttings. New plantations are readily made by pulling off the young shoots from three-year old plants in spring, generally in the latter end of April, as soon as ever they attain a sufficiency of hardness to enable them to maintain themselves on the moisture of the ground and atmosphere while the lower extremities are preparing roots. If advantage be taken of any showery weather that may occur, there is little trouble in obtaining any required number of plants, which may either be struck in the bed where they are to grow, inserting a foot apart each way, or in some other shady spot whence they may be removed to permanent quarters when rooted. The latter plan is the best when the weather is too bright and sunny to expect Sage to strike well in its ordinary quarters. See the young plants do not suffer from want of water during their first summer and hoe the rows regularly to induce a bushy growth, nipping off the growing tips if shooting up too tall. Treat the ground with soot and mulch in winter with old manure. Cuttings may also be taken in the autumn, as soon as the plants have ceased flowering.

Sage is also very often propagated by layers, in the spring and autumn, the branches of old plants being pegged down on the ground and covered with half an inch of earth. The plant being like other of the woody-stemmed garden herbs, a "stem rooter," each of the stems thus covered will produce quantities of rootlets from just lying in contact with the ground and can after a time be cut away from the old plant and transplanted to other quarters as a

separate plant. Young plants or young rooted growths are found at the base of old, apparently dead shoots of Sage: these growths can be severed from the parent and a new plantation formed.

Red Sage is always propagated by layering or by cuttings, as the seed does not produce a red-leaved plant, but reverts back to the original green-leaved type, though efforts are being made to insure the production of a Red Sage that shall set seed that shall remain true and develop into the red-leaved plant. When grown on a commercial scale, and sown in drills at the rate of two seeds to the inch, and in rows 15 ins. apart, about 8 lbs. of seed will be needed to the acre.

At the present day by far the largest demand for Sage is for culinary use, and it should pay to grow it in quantity for this purpose as it is little trouble. For this, the White Variety, with somewhat pale green leaves should be taken.

The strength and fineness of the flavour depend mostly upon the harvesting and drying. For drying, the leaves are cut when the flowers appear. Sage is dried in bunches like the other woody-stemmed sweet herbs, care being taken to pick only on a dry day, and to strip off all stained and insect-eaten leaves.

When used for *medicinal* purposes, the Red Sage is mostly employed. The leaves must be handpicked, gathering only on a fine day in the morning after the sun has dried off the dew and rejecting all leaves not in perfect condition. They should then be very carefully dried, which on a warm, sunny day may be done in the open, though not exposed to direct sun, lest too great heat should cause the leaves to lose some of their volatile oil on which their medicinal properties depends. The leaves may be placed on wire sieves or trays, placed a few feet from the ground, to ensure a free current of warm air, but as in the case of the bunched herbs, they must be taken in before there is any risk of damp from showers or evening dew.

When properly dried the properties of the plant are in a great measure retained, but Sage should not be kept long in a dried state, not longer than one year, as it rapidly deteriorates.

It is estimated that 9 lbs. of fresh leaves produce 2 lbs. of the dried herb.

Uses. Sage has been medicinally employed in many ways,

even though in this country it has fallen into disuse in regular official practice.

It has stimulant, astringent, tonic and carminative properties and has been used in dyspepsia, but is now mostly employed as a condiment. In the United States, however, where it is still an official medicine, it is in some repute, especially in the form of an infusion, the principal and most valued application of which is as a wash for the cure of affections of the mouth and as a gargle in inflamed sore throat, being excellent for relaxed throat and tonsils, and also for ulcerated throat cases. The gargle is also useful for bleeding gums and to prevent an excessive flow of saliva.

When a more stimulating effect is desirable to the throat than that made by the ordinary infusion of the herb with boiling water, the gargle may be made of equal quantities of vinegar and water in a closed vessel, $\frac{1}{2}$ pint of hot malt vinegar being poured on 1 oz. of leaves, adding $\frac{1}{2}$ pint of cold water, and used frequently.

The infusion when made for *internal* use is termed Sage Tea, and can be made simply by pouring 1 pint of boiling water on to 1 oz. of the dried herb, the dose being from a wineglassful to half a tea-cupful, as often as required, but the old-fashioned way of making it is more elaborate, and the result is quite a pleasant drink, very cooling in fevers, and also a cleanser and purifier of the blood. Half an ounce of fresh Sage leaves, 1 oz. of sugar, the juice of one lemon, or $\frac{1}{4}$ oz. of grated rind, and infused in a quart of boiling water and strained off after half an hour. (In Jamaica, the negroes use as a cooling drink in fevers Sage Tea made from the leaves of this Sage, sweetened, and flavoured with Lime juice, instead of lemon.)

Sage Tea or infusion of Sage, is a valuable agent in the delirium of fever, and in the nervous excitement frequently accompanying brain and nervous diseases.

The fresh leaves, rubbed on the teeth, will cleanse them and strengthen the gums. Sage is a common ingredient in tooth powders.

Oil of Sage, the volatile oil distilled from the leaves, is a useful ingredient in embrocation for rheumatism. It is also much employed in perfumery. About 300 lbs. of the stem and leaves yield 1 lb. of oil.

In Sussex, at one time, country folk would munch Sage leaves on nine consecutive mornings whilst fasting to cure ague, and the dried leaves have been used for smoking in pipes as a remedy for asthma.

In the region where Sage grows wild, its leaves are boiled in vinegar and used as a tonic.

Sage and Onion stuffing for ducks and geese and for pork is well known, being eaten with them as the bitter and condimentary pungency of the herb enables the stomach better to digest the rich, luscious, oily meat. A few less familiar recipes may, however, be of interest, taken mostly from cookery books of a former generation.

Here is an old recipe in Warner's "Ancient Cookery," 1791, for "Sawgeat," Sawge, as stated above, being an old form of the name Sage.

Sawgeat. Take Pork and seeth (boil) it wel and grinde it smale and medle (mingle) it with ayren (eggs) and ygrated (grated) brede (bread). Do thereto salt sprinkled and saffron. Take a close litull ball of it in foiles (leaves) of Sawge. Wet it with a bator (batter) of ayren, fry and serve forth.

In "The Cook's Oracle," 1821, there is a good recipe for: **Sage and Onion Sauce.** Chop very fine an ounce of onion and half an ounce of green Sage leaves, put them in a stamper with 4 spoonfuls of water, simmer gently for 10 minutes, then put in a teaspoonful of pepper and salt and one ounce of fine breadcrumbs. Mix well together, then pour to it $\frac{1}{4}$ pint of Broth, Gravy or Melted Butter, stir well together and simmer a few minutes longer. This is a relishing sauce for Roast Pork, Geese or Duck, or with Green Peas on Maigre Days.

The same book gives: **A Relish for Roast Pork or Goose.** 2 oz. of leaves of Green Sage, an oz. of fresh lemon peel, pared thin, same of salt, minced shallot and half a drachm of Cayenne pepper, ditto of Citric acid, steeped for a fortnight in a pint of Claret. Shake it well every day; let it stand a day to settle and decant the clear liquid. Bottle it and cork it close. Use a tablespoonful or more in a quarter of a pint of gravy or melted butter.

Another modern Sage sauce, excellent with roast pork: **Sagina Sauce.** Take 6 large Sage leaves, 2 onions, 1 teaspoon-

ful of flour, 1 teaspoonful of vinegar, butter the size of a walnut, salt, pepper, and $\frac{1}{2}$ pint of good brown gravy. Scald the Sage leaves and chop them with the onions to a mincemeat. Put them in a stew-pan with the butter, sprinkle in the flour, cover close and steam 10 minutes. Then add the vinegar, gravy and seasoning, and simmer half an hour.

In Walsh's "Manual of Domestic Economy," 1857, is the following recipe for : **Sage Cheese.** Bruise the tops of young red Sage in a mortar with some leaves of spinach and squeeze the juice ; mix it with the rennet in the milk, more or less, according to the preferred colour and taste. When the curd is come, break it gently and put it in with the skimmer till it is pressed two inches above the vat. Press it 8 or 10 hours. Salt it and turn every day.

Many kinds of Sage have been used as substitutes for tea, the Chinese having been said to prefer Sage Tea to their own native product, and at one time bartering for it with the Dutch, giving thrice the quantity of their choicest tea in exchange. It is recorded that George Whittfield, when at Oxford in 1733, lived wholesomely, if sparingly, on a diet of Sage Tea alone, sugar and coarse bread. *Palsamie Sage, Salvia grandiflora*, a broad leaved Sage with many-flowered whorls of blossoms, used to be preferred to all others for making tea. An infusion of Speedwell (*Veronica officinalis*), Sage and Wood Betony together is said to make an excellent beverage for breakfast, as a substitute for tea, Speedwell having somewhat the flavour of Chinese green tea. In Holland, the leaves of *Salvia glutinosa*, the Yellow flowered Hardy Sage, both flowers and foliage of which exhale a pleasant odour, are used to give flavour to country wines.

It was formerly thought that Sage used in the making of Cheese improved its flavour, and in a passage of a poem of Gay ; "Marbled with Sage, the hardening cheese she pressed," we find a reference to this custom, which no doubt was a wholesome one, the volatile oil in the sage leaves acting as a corrective to the richness of the cheese, in the same way that it is of use when Sage forms an ingredient of stuffings and sauces taken with rich meat.

Italian peasants eat Sage as a preservative of health and many of our own country people often eat the leaves with bread and butter, than which, it has been said, there is no better and more wholesome way of taking it.

A species of Sage, *Salvia pomifera*, the Apple-bearing Sage, of a very peculiar growth is common on some of the Greek islands. It has a firm, fleshy protuberances of about $\frac{3}{4}$ in. thickness, swelling out from the branches of the plant and supposed to be produced in the same manner as oak apples, by the puncture of an insect of the *cynips* genus. These excrescences are semi-transparent like jelly. They are called Sage Apples, and under that name are to be met with in the markets as an article of ordinary sale. They are candied with sugar and made into a kind of sweetmeat and conserve which is regarded as a great delicacy by the Greeks and is said to possess healing and salutary qualities. It has an agreeable and astringent flavour. This plant is considerably larger than the common Sage of our gardens, and its flavour and smell are much more powerful, being somewhat like a mixture of Lavender and Sage. It grows very abundantly in Candia, Syros and Crete, where it attains to the size of a small shrub. The leaves are collected annually, dried and used medicinally as an infusion.

Another South European species, an annual, *Salvia Horminum*, the Red-topped Sage, has its whorls of flowers terminated by clusters of small purple or red leaves, being for this peculiarity often grown in gardens as an ornamental plant. The leaves and seed of this species, put into the vat while fermenting, greatly increase the inebriating quality of the liquor. An infusion of the leaves has been considered a good gargle for sore gums, and a powder of them to make a good snuff.

Certain varieties of Sage seeds are mucilaginous and nutritive, and are used in Mexico by the Indians as a food, under the name of *Chia*.

SUMMER SAVORY.—*Satureia Hortensis* (Linn.).

WINTER SAVORY.—*S. Montana* (Linn.).

The genus *Satureia* (the old Latin name used by Pliny), of the order Labiatae, comprises about 14 species of highly aromatic, hardy herbs or under shrubs, all, except one species, being natives of the Mediterranean region.

Several species have been introduced into England, but only two, the annual Summer or Garden Savory and the perennial, Winter Savory are generally grown. The annual is more usually

grown, but the leaves of both are employed in cookery, like other sweet herbs, the leaves and tender tops being used, with Marjoram and Thyme, to season dressings for turkey, veal or fish.

Both species were noticed by Virgil as being among the most fragrant of herbs, and on this account recommended to be grown near beehives. There is reason to suppose that they were cultivated in remote ages, before the East Indian spices were known and in common use. Vinegar, flavoured with Savory and other aromatic herbs, was used by the Romans in the same manner as Mint sauce is by us.

In Shakespeare's time, Savory was a familiar herb, for we find it mentioned, together with the Mints, Marjoram and Lavender, in "The Winter's Tale."

Description. Summer Savory is a hardy, downy annual, with slender erect stems about a foot high. It flowers in July, having pale lilac labiate flowers, in small axillary clusters, on short stalks or pedicels, sometimes in groups of three. The leaves about $\frac{1}{2}$ in. long, are entire, oblong linear, acute, narrowed at the base into a short leaf stalk, often fascicled, i.e., in little bunches or groups. The hairs on the stem are short and decurved. The whole plant is very fragrant.

Cultivation. Summer Savory is raised from seeds, sown early in April, in shallow drills, 9 in. or a foot apart. Select a sunny situation and thin out the seedlings, when large enough, to 6 ins. apart in the rows. It likes a rich, light soil.

The seeds may also be sown broadcast, when they must be thinned out, the thinned out seedlings being planted in another bed at 6 in. distance from each other and well watered. The seeds are very slow in germinating.

The early spring seedlings may be first topped for fresh use in June. When the flower buds appear, the stems may be cut off and hung up to dry for future use, in the usual way (see p. 13). The cut down plants will continue to produce fresh shoots, and these may be gathered later on.

Uses. As a kitchen herb, Savory, which has a distinctive taste, though it somewhat recalls that of Marjoram, is not only added to snuffings, pork pies and sausages, but also to stews and sauces used with such meats as veal, pork, duck and goose. Sprigs of it, fresh,

may be boiled with broad beans and green peas, in the same manner as Mint is employed. It is also boiled with dried peas in making pea soup. For garnishing it has been used as a substitute for Parsley and Chervil. Savory has aromatic and carminative properties, and though chiefly used as a culinary herb, it may be added to medicines for its aromatic and warming qualities. It was formerly deemed a sovereign remedy for the colic. Culpepper thought highly of them and tells us: "Keep it dry by you all the year, if you love yourself and your ease, and it is a hundred pounds to a penny if you do not," and goes on to enumerate certain complaints for which it may be used as a remedy. He considered Summer Savory better than Winter Savory for drying to make conserves and syrups.

WINTER SAVORY.

Winter Savory is a dwarf, hardy, perennial, glabrous or slightly pubescent under shrub, also a native of Southern Europe. The stems are woody at the base, 12 to 18 ins. high, much branched and spreading. The leaves are oblong, linear and acute, the lower ones often wedge-shaped and obtuse. The flowers in bloom in June are very pale purple or pinkish, and are arranged in spikes or racemes.

Cultivation. It is propagated either from seeds, sown at a similar period and in the same manner as Summer Savory, or from cuttings and divisions of root. It is woodier and more bushy than Summer Savory.

Cuttings formed of young side shoots, with a heel attached, may be taken in April or June, and will readily root under a hand glass, or in a shady border outside.

Divisions of the roots should be made in March or April, and plants obtained in this way, or from cuttings, should be permanently inserted during a showery period in the latter part of summer, in rows, at the distance of one foot apart.

The plant grows better in a poor, stony soil than a rich one. In a rich soil, plants take in too much moisture to stand the severity of our winter. In the soil that suits it, Winter Savory makes a good-sized shrub. It will continue for several years, but when the plants are old the shoots are short and not so well furnished with

leaves. It is, therefore, well to raise a supply of young plants every other year.

For drying, the first cutting may be secured during July, the second in late August or September.

Uses. Parkinson tells us that Winter Savory used to be dried and powdered and mixed with grated bread-crumbs "to breade their meate, be it fish or flesh, to give it a quicker relish." It is recommended by older writers, together with other herbs, in the dressing of trout.

When dried, it is used as seasoning in the same manner as Summer Savory, but is considered inferior in flavour. It is not employed medicinally.

Both the old authorities and modern gardeners agree that a sprig of either of the Savories rubbed on wasp and bee stings gives instant relief.

Satureja Thymbra, which is used in Spain as a spice and is closely allied to the Savouries grown in English kitchen gardens, yields an oil containing about 19 per cent of Thymol. Other species of *Satureja* contain Carvacrol. The oil from wild plants of Winter Savory contains 30—40 per cent. of Carvacrol, and that from cultivated plants still more. (See special pamphlet on Thyme.)

SOUTHERNWOOD. *Artemisia Abrotanum* (Linn.).

Southernwood is a woody stemmed perennial, belonging to the order **Compositæ**, a native of the south of Europe, indigenous in Spain and Italy.

It is a familiar and favourite plant in our gardens, growing about a couple of feet high, though it rarely flowers in our gardens, and the peculiar affection with which this little shrub with its finely divided, greyish-green leaves—is regarded is somewhat difficult to explain. It was introduced into this country in 1548, and there are few gardens in which a root or two of "Old Man" or "Lad's Love" (to quote two of its popular names) may not be found.

The leaves have a fragrant, highly aromatic odour, that is somewhat lemon-like. This odour is dependent on the volatile oil

contained in the plant, which consists chiefly of Absinthol, and is common in other Wormwoods. The scene is said to be disagreeable to bees, and also to other insects, for which reason the French call the plant **Garderobe**, as moths will not attack clothes among which it is laid.

In Italy, Southernwood is employed as a culinary herb, the young shoots being used for flavouring cakes and other culinary preparations.

TANSY.—*Tanacetum Vulgare* (Linn.).

Tansy, a composite plant very familiar in our hedgerows and waste places, is a hardy perennial, widely spread over Europe.

The stem is erect and leafy, about 2-3 feet high, grooved and angular. The leaves are alternate, much cut into, 2-6 inches long and about four inches wide. The plant is conspicuous in August and September by its heads of round, flat, dull yellow flowers, growing in clusters, which earn it the name of "Buttons." It has a very curious, and not altogether disagreeable odour, somewhat like camphor.

It is often naturalised in our gardens for ornamental cultivation. The feathery leaves of the Wild Tansy are beautiful, especially when growing in abundance on marshy ground, and it has a more refreshing scent than the Garden Tansy.

The name Tansy is probably derived from the Greek *Athanasia*, which signifies immortality, either, says Dodoens, because it lasts so long in flower, or as Ambrosius thought, because it is so capital for preserving dead bodies from corruption. It was said to have been given to Ganymede to make him immortal.

Cultivation. Tansy will thrive in almost any soil and may be increased, either in spring or autumn, by slips or by dividing the creeping roots, which if permitted to remain undisturbed, will, in a short time, overspread the ground. When transplanting the slips or portions of root, place therefore at least a foot apart.

Uses. Although the leaves have an acrid, bitter taste, they have been used, shredded, for flavouring puddings, cakes, omelettes, salads, stews and other culinary dishes. "This balsamic plant," said Boerhave, the great Danish physician of the 18th century,

will supply the place of nutmeg and cinnamon." Gerarde tells us that Tansy Teas were highly esteemed in Lent, as well as Tansy puddings.

Tansy is connected with some interesting old customs observed at Easter time, when, says the old Chronicler, the clergy of some churches, even the Archbishops and Bishops, were wont to play at handball with men of their congregation, and a Tansy cake was the reward of the victors. These Tansy cakes were made from the young leaves of the plant, mixed with eggs, and were thought to purify the humours of the body after the limited fare of Lent. In time, this custom obtained a kind of symbolism, and Tansies, as these cakes were called, came to be eaten on Easter Day as a remembrance of the bitter herbs eaten by the Jews at the Passover. Coles (1656) says the origin of eating it in the spring is because Tansy is very wholesome after the salt fish consumed during Lent, and counteracts the ill-effects which the "moist and cold constitution of winter has made on people." As a bitter tonic, Tansy tea has an old reputation in country districts for fever and other illnesses. It is largely used for expelling worms in children, and is also considered valuable in hysteria and in kidney weaknesses.

TARRAGON. *Artemisia Dracunculus* (Linn.).

Tarragon, a member of the composite tribe, closely allied to Wormwood, as a fairly hardy, herbaceous, rather shrubby perennial—a native of southern Russia, Siberia and Tartary, and cultivated for the last 500 years in Europe for the use of its aromatic leaves and tender shoots. Tarragon is more common in Continental than in English cookery, and has long been cultivated in France for culinary purposes.

The name Tarragon is a corruption of the French *Esdragon*, derived from the Latin *Dracunculus*, a little dragon, which also serves as its specific name. It was of old sometimes called little Dragon Mugwort, and in French has also the name *Herbe au Dragon*. To this, as to other Dragon herbs was ascribed the faculty of curing the bites and stings of venomous beasts and of mad dogs. The name is practically the same in most countries, though no real reason for the title is known.

Description. The plant has numerous branching stems, which grow to a height of about 2 ft. and bear long, narrow leaves

which unlike other members of its genus, are undivided. It blossoms in August, the small flowers, in round heads, being yellow mingled with black, and rarely fully open. The roots are long and fibrous, spreading by runners.

Cultivation. Two kinds of Tarragon are cultivated in kitchen gardens. The French Tarragon, with very smooth, dark green leaves and the true Tarragon flavour, which is a native of the South of Europe, and Russian Tarragon, a native of Siberia, with less smooth leaves of a fresher green shade and somewhat lacking in the peculiar tartness of the French variety.

As Tarragon rarely produces fertile flowers, either in England or France, it is not often raised by seed, but it may be readily propagated by division of roots in March or April, or by cuttings struck in a little warmth when growth is commencing in spring or later in the summer, under a hand-glass, placed outside. A few young plants should be raised annually to keep up a supply.

When transplanting, divide clumps into small portions and pull to pieces with the hand, but do not chip them into sections with the spade, or you will damage the roots. Plant the pieces a foot apart each way, and leave them undisturbed for four years. As they spread a good deal, they will soon cover the ground freely.

Tarragon loves warmth and sunshine, and succeeds best in warm, rather dry situations, and a little protection should also be afforded the roots through the winter, as during severe frost they are liable to be injured. Both varieties need a dry, rather poor soil, for if set in a moist soil, they are likely to be killed by our winter.

The green leaves should be picked between Midsummer and Michaelmas. The foliage may also be cut and dried in early autumn for use in a dry state afterwards. The beds should then be entirely cut down and top-dressed to protect from frost.

Sometimes strong, young plants planted in a sheltered border from October to December, will produce green shoots all through the winter if the frost be not too severe, but, as a rule, if green leaves are required during winter, a few roots should be lifted in the autumn and placed in heat: it will require but a small quantity to maintain a succession.

The leaves are generally used in the fresh condition but may be dried in the usual way in bunches, if desired. For this purpose

they are gathered in midsummer. A second cutting may be made in late September or early October.

Uses. John Evelyn, in his treatise on salads, says of Tarragon: "'Tis highly cordial and friend to the head, heart and liver."

In Continental cookery its use is advised to temper the coolness of other herbs in salads. The leaves, which have a fragrant smell in addition to their aromatic taste, are also used, especially by the French, with stews, steaks and other meat preparations. They are often employed as an ingredient in pickles. Tarragon forms also an excellent flavouring for fish sauces. Perhaps the most popular way it is employed is as a decoction in vinegar. Vinegars used in former times frequently to be aromatised by steeping in them Rosemary, Gilliflowers and Barberries, but Tarragon is the only herb now used in this manner.

To make Tarragon vinegar, fill a wide mouthed bottle with the freshly gathered leaves, picked just before the herb flowers, on a dry day. Pick the leaves off the stalks and dry a little before the fire. Then place in a jar, cover with the best vinegar, allow to stand some hours, then strain through a flannel jelly bag and cork down in the bottles. The best white vinegar should be used. In France the famous Vinegar of Maille is made in this way.

Tarragon vinegar is the only correct flavouring for Sauce Tantara, but must never be put into soups, as the taste is too strong and pungent. French cooks usually mix their mustard with Tarragon vinegar.

The Russian Tarragon is eaten in Persia to excite an appetite at meals.

Fresh Tarragon possesses an essential volatile oil, chemically identical with that of Anise, which becomes lost in the dried herb.

One pound of the oil is obtained by distilling 300 to 500 lbs. of the green parts of the herb. It is used for perfuming toilet articles.

The root of Tarragon, held between the teeth, was said in the days of our forefathers to cure toothache, but one hears nothing of this use of it nowadays.

THYMUS VULGARIS (Linn.).

The **Garden Thyme** (*Thymus vulgaris*) the little aromatic sweet herb so familiar to us for its culinary use in stuffings, flavourings, etc., is an 'improved' cultivated form of the Wild Thyme of the mountains of Spain and other European countries bordering on the Mediterranean, flourishing also in Asia Minor, Algeria and Tunis, and is a near relation to our own Wild Thyme, *Thymus serpyllum*, which however has broader leaves (the margins not reflexed as in the Garden Thyme) and also a weaker odour.

It is cultivated now in most countries with temperate climates, though it does not seem to have had any reputation in antiquity as a culinary herb, nor do we know at what period it was first introduced into northern countries, but for many centuries it has held an important place in the English kitchen-garden, especially before the introduction of Oriental spices, when, with other aromatic herbs, it was even more used in cookery than now. It was certainly commonly cultivated in England before the middle of the sixteenth century: how long previous to that is not known, but it was well figured and described by Gerarde.

The name Thyme, in its Greek form, was first given to the plant by the Greeks as a derivative from a word which meant 'to fumigate,' either because they used it as their incense, for its balsamic odour, or because it was taken as a type of all such sweet-smelling herbs. The antiseptic properties of Thyme were fully recognised in classic times, there being a reference in Virgil's *Georgics* to its use as a fumigator, and Pliny tells us that when burnt, it puts to flight all venomous creatures. Another theory as to the derivation of the name is that it comes from the Greek word *thumus*, signifying courage, the plant being held in ancient and mediæval times to be a great source of invigoration, its cordial qualities inspiring courage. It was, besides, an emblem of activity, bravery and energy, and in the days of chivalry, it was the custom for ladies to embroider the device of a bee hovering over a sprig of Thyme on the scarves they presented to their knights. In the south of France, Wild Thyme is a symbol of extreme Republicanism, tufts of it being sent with the summons to a meeting to members of a society holding those views.

Strangely enough, this little plant, so familiar also in its wild form, has never been known in this country by any other common

native name, though occasionally "Thyme" is qualified in some way, such as "Running Thyme," or "Mother-of-Thyme." The latter name was probably originally "Mother Thyme," from its use in uterine disorders, in the same way that "Motherwort" (*Leonurus Cardiacus*) has received its popular name for similar use in the domestic medicine of the countryside.

The affection of bees for Thyme is well known, and the fine flavour of the honey of Mount Hymettus, near Athens, was said to be due to the Wild Thyme with which it was covered (probably *Thymus vulgaris*), the honey from this spot being of such especial flavour and sweetness that in the minds and writings of the ancients, sweetness and Thyme was indissolubly united. "Thyme, for the time it lasteth, yielded most and best honie and therefor in old time was accounted chief," says an old English writer. Large clumps of either Garden or Wild Thyme may with advantage be grown in the garden about 10 ft. away from the hives.

Though apparently not in general use as a culinary herb among the ancients as it is now, it was employed by the Romans to give its peculiar aromatic flavour to cheese, a practice followed likewise, in modern days, not only with the leaves (see Sage pamphlet) but also with the flowers and seeds of other plants. The mountaineers in the Canton of Glarus in Switzerland prepare a cheese, known as *Schabzieger*, which is readily distinguished by its peculiar marbled appearance and aromatic flavour: these are communicated by the pressed flowers or the bruised seeds of the *Melilotus officinalis*, Common Melilot, which has a sweet, haylike scent.

Description. *Thymus vulgaris* is a perennial with a woody, fibrous root. The stems are numerous and are round, hard, branched and usually from 4 to 8 ins. high, when of the largest growth scarcely attaining a foot in height. The leaves are small, only about $\frac{1}{8}$ in. long and $\frac{1}{16}$ in. broad, narrow and elliptical, greenish grey in colour reflexed at the margins, and set in pairs upon very small footstalks. The flowers terminate the branches in whorls. The calyx is tubular, striated, closed at the mouth with small hairs and divided into two lips, the uppermost cut into three teeth and the lower into two. The corolla consists of a tube about the length of the calyx, spreading at the top into two lips of a pale purple colour, the upper lip erect or turned back and notched at the end, the under lip longer and divided into three segments. The seeds are roundish and very small, about 170,000 to the ounce, it has been calculated,

and 24 oz. to the quart: they retain their germinating power for three years. The plant has an agreeable aromatic smell and a warm pungent taste. The fragrance of its leaves is due to an essential oil, which gives it its flavouring value for culinary purposes, and is also the source of its medicinal properties. It is in flower from May to August.

Stocks may also be increased by dividing old roots, or making cuttings, by slipping pieces off the plants with roots to them and planting out with trowel or dibber, taking care to water well. This may be done as soon as the weather is warm enough, from May to September. The old clumps may be divided to the utmost extent, and provided each portion has a reasonable bit of root attached, success is assured. The perfume of Lemon Thyme is sweeter if raised from cuttings or division of roots, rather than from seed.

Although Thyme grows easily, especially in calcareous light, dry, stony soils, it can be cultivated in heavy soils, where, however, it is less aromatic. It dislikes excess of moisture. To form Thyme beds, choose uncultivated ground, with soil too poor to nourish cereals. If Thyme grows upon walls or on dry, stony land, it will survive the severest cold of this country. If the soil does not suit it very well, and is close and heavy, some material for lightening it, such as a little road-sand or sweepings, ensuring reasonable porosity, will be welcomed and should be thoroughly incorporated — in a gritty soil it will root quickly, but does not like a close, cold soil about its roots.

According to Gattcfosse, the Thyme is “a faithful companion of the Lavender. It lives together with it in perfect sympathy and partakes alike of its good and its bad fortune.” Generally speaking, the conditions most suitable to the growth of Thyme are identical with those favoured by Lavender.

The plant is often overrun by Dodder (*Cuscuta epithymum*). If this happens, cut off the affected plants and burn them, or use a solution of sulphate of iron.

At the close of the summer, as soon as the herbs have been cut as much as necessary, the beds should be attended to, all weeds cleared away and the soil well forked on the surface.

In winter, protect the plants from frost by banking up with earth.

Thyme roots greatly in the ground and soon extracts the goodness of the soil, hence whatever is sown or planted upon a spot of ground whereon Thyme grew in the preceding year, will seldom thrive unless the ground be first trenched deeper than the Thyme was rooted, and well manured.

The whole herb is used, fresh and dried. Though cultivated in gardens for culinary use, Common Thyme is not grown in England on a large scale, most of the dried Thyme on the market having been imported from the Continent, mainly from Germany.

Its essential oil is distilled in the south of France, the flowering herb being used for the production of Oil of Thyme. In the neighbourhood of Nîmes, the entire plant is used, and the distillation carried on at two periods of the year, in May and June, when the plant is first in flower, and again later in the autumn. In this country, only a comparatively small amount of the essential oil is distilled, but it is considered to be of a high quality.

The *fresh* herb for distilling should be collected on a dry day, when just coming into flower; the lower portions of the stem, together with any yellow or brown leaves, should be rejected and the herbs conveyed to the distillery as soon as possible. If necessary to travel by train, they may be packed in open crates—banana crates will do for the purpose—or light boxes, if possible in quantities sufficient to fill a cattle truck, arranging for them to travel at night, for the sake of coolness (in which case, they should be cut in the late afternoon) and labelling "Medicinal Plants, for immediate delivery. Urgent."

For *drying* (mainly for culinary purposes), tie up by the stalk ends in uniform sized bunches, about a dozen in a bunch, and about 6 ins. long.

Uses. In this country Thyme is principally in request for culinary requirements, for its use, either fresh or dried, or in decoction, in flavouring stuffings, sauces, pickles, stews, soups, jugged hare, etc. The Spaniards infuse it in the pickle with which they preserve their olives.

The dried flowers have been often used in the same way as lavender, to preserve linen from insects.

Thyme enters into the formula for Herb Tobacco and employed in this form is good for digestion, headache and drowsiness.

In herbal medicine Thyme is generally now used in combination with other remedies.

The action of Thyme is antiseptic, antispasmodic, tonic and carminative.

The pounded herb, if given fresh, from 1—6 oz. daily, mixed with syrup, has been employed with success as a safe cure for whooping-cough. An infusion made from one ounce of the dried herb to one pint of boiling water, sweetened with sugar or honey is also used for the same purpose.

All the different species of Thyme and Marjoram yield fragrant oils extensively used by manufacturing perfumers for scenting soaps. When dried and ground, they enter into the composition of sachet powders.

Two commercial varieties of Thyme Oil are recognised, the "red," the crude distillate, and the "white" or colourless, which is the "red" when properly rectified by re-distilling. The yield of oil is very variable, from as low as 2 per cent. to 1 per cent, in the fresh herb (100 lbs. of the fresh flowering tops yielding from $\frac{1}{2}$ to 1 lb. of essential oil) and 2.5 per cent. in the dried herb.

French Oil of Thyme is the most esteemed variety of the oil known. A considerable quantity of Thyme Oil is also distilled in Spain. A somewhat different oil is obtained from the Lemon Thyme, *Thymus serpyllum*, var. *citriodorus*. This oil has an odour resembling Thyme, Lemon and Geranium. Oil of Thyme is employed as a rubefacient and counter irritant in rheumatism, etc. In Perfumery, Essence of Thyme is used for cosmetics and rice powder. It is also used for embalming corpses.

Thymol, a most valuable crystalline phenol is the basis of the fragrant volatile Essence of Sweet Thyme, and is obtainable from *Carum copticum*, *Manarda punctata* and various other plants, as well as from *Thymus vulgaris*, being present to the extent of from 20—60 per cent. in the oils which yield it. Thymol is a powerful antiseptic for both internal and external use; it is also employed as a deodorant and local anæsthetic. It is extensively used to medicate gauze and wool as surgical dressings. It resembles carbolic acid in its action, but is less irritant to wounds, while its germicidal action is greater. It is, therefore, preferable as a dressing, and during recent years it has been one of the most extensively used antiseptics.

Several other plants can be utilised as sources of Thymol, although none yield such high percentages as Ajowan seed. The following new sources of Thymol were suggested when the scarcity of the valuable antiseptic made itself so severely felt on curtailment of Continental supplies: Garden Thyme and Wild Thyme (*Thymus vulgaris* and *serpyllum*), American Horse Mint (*Monarda punctata*), *Cunila maritima*, *Mosla japonica*, *Origanum hirtum*, *Ocimum viride* and *Satureja thymbra*.

The Oil of Thyme obtained by distilling the fresh-flowering herb of *Thymus vulgaris* is already an article of commerce and contains varying amounts of Thymol, but the actual amount present is not very high, varying from 20 to 25 per cent., only in very rare cases amounting to more, and the methods of separation in order to obtain a pure compound are more complicated than in the manufacture from Ajowan oil. With Thymol at its high price during the war, it might have paid to prepare it from Thyme Oil, but hardly under normal conditions. Early in 1915, an English chemist took up the preparation of Thymol on a commercial scale from Thyme Oil and put the product on the market: though the crystals did not melt quite as high as the requirements of the British Pharmacopœia it could be used for practically all the purposes for which Thymol is employed.

WILD THYME.

The Wild Thyme *Thymus Serpyllum* (Linn), is indigenous to the greater part of the dry land of Europe, though a great deal less abundant than the Common Thyme so widely cultivated. It is found up to a certain height on the Alps, on high plateaux, and in valleys, along ditches and roads, on rocks, in barren and dry soil, and also in damp clay soil destitute of chalk. It is seen in old stoney, abandoned fields, dried up lawns and on clearings. In this country it is found chiefly on heaths and in mountainous situations, and is also often cultivated as a border in gardens or on rockeries and sunny banks. It was a great favourite of Francis Bacon, who in giving us his plan for the perfect garden, directs that alleys should be planted with fragrant flowers: "burnet, wild thyme and waterminits, which perfume the air most delightfully, being trodden upon and crushed," so that you may "have pleasure when you walk or tread."

The herb wherever it grows wild denotes a pure atmosphere and was thought to enliven the spirits by the fragrance which it

diffuses into the air around. The Romans gave Thyme as a sovereign remedy to melancholy persons.

Wild Thyme is a perennial, more thickset than the Garden Thyme, though subject to many varieties, according to the surroundings in which it grows. In its most natural state, when found on dry exposed downs, it is small and procumbent, often forming dense cushions; when growing among furze or other plants which afford it shelter, it runs up a slender stalk to a foot or more in height, which gives it a totally different appearance. The specific name *serpyllum* is derived from a Greek word meaning to creep, and has been given it from its usually procumbent and trailing habit.

The root is woody and fibrous, the stems numerous, hard, branched, procumbent, rising from 4 ins. to 1 ft. high, ordinarily reddish-brown in colour. The bright green oval leaves $\frac{1}{8}$ in. broad, tapering below into very short footstalks, are smooth and beset with numerous small glands. They are fringed with hairs towards the base and have the veins prominent on the under surfaces. Their margins are entire and not recurved as in Garden Thyme. As with all other members of the important order *Labiata* to which the Thymes belong, the leaves are set in pairs on the stem. The plant flowers from the end of May or early June to the beginning of autumn, the flowers, which are very similar to those of the Garden Thyme, being purplish and in whorls at the top of the stems.

Bees, as already mentioned, are especially fond of the Thyme blossoms, from which they extract much honey. Spenser speaks of the "bees-alluring time," and everyone is familiar with Shakespeare's description of the "bank where the wild thyme blows" the abode of the queen of the Fairies. It was looked upon as one of the fairies' flowers, tufts of Thyme forming one of their favourite playgrounds.

Thyme has somewhat strangely been associated with death; not only is it one of the fragrant flowers favoured in some parts for planting on graves (in Wales, particularly, none but sweet-scented plants being tolerated for this purpose), but the Order of Oddfellows to this day still carry sprigs of Thyme at funerals and throw them into the grave of their dead brother. An old tradition says that Thyme was one of the herbs that formed the fragrant bed of the Virgin Mary.

Cultivation. Wild Thyme will grow on any soil, but

prefers light, sandy or gravel ground exposed to the sun. Propagate by seeds, cuttings, or division of roots. Care must be taken to weed. Manure with farmyard manure in autumn or winter and nitrites in spring.

The whole herb is used. Cut when in full flower, in July and August, and dry in the same manner as Common Thyme. It is much picked for sale in France, chiefly in the fields of the Aisne, for the extraction of its essential oil, a yellow liquid, with a weaker scent than that of Oil of Thyme extracted from *Thymus vulgaris* and is called Oil of Serpolet. The flowering tops are used to flavour jugged hare, etc.; they have a milder and more grateful flavour than the Common Thyme. Although it has been stated that animals will seldom eat this plant and that rabbits do not touch it, yet according to others, it has been alleged that sheep love to crop its fragrant leaves and that as a consequence, a fine flavour is then imparted to their flesh.

It is said that Wild Thyme and Marjoram laid by milk in the dairy will prevent it being turned by thunder.

In medicine, Wild Thyme or Serpolet has the same properties as Common Thyme, but to an inferior degree. In perfumery, Oil of Serpolet is chiefly used for soap. The flowering tops, macerated for 24 hours or so in salt and water are made into a perfumed water.

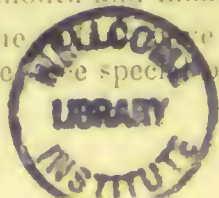
WALNUT. *Juglans Nigra* (Linn.).

Though the Walnut Tree will hardly be looked on as a culinary herb, yet its fruits may be included among those used for cookery, both as pickles and for the catsup prepared from them, which is used to flavour certain dishes. Both pickles, walnuts, and Walnut Catsup are also of value for their medicinal properties.

The fruit, when young and unripe, makes a wholesome, anti-scorbutic pickle, slightly laxative, the vinegar in which the green fruit has been pickled proving a capital gargle for sore and slightly ulcerated throats. Walnut catsup embodies the medicinal virtues of the unripe nuts. A green walnut, boiled in syrup and preserved in it, is an excellent homely preventative of constipation.

The juice of the green husks, boiled with honey, is also a good gargle for a sore mouth and inflamed throat.

The leaves of the tree have no culinary uses, but are of distinct medicinal value. See special pamphlet on the Walnut.



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